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ADMINISTRATION OF THE TORONTO DE-PARTMENT OF PUBLIC HEALTH

By TORONTO BUREAU OF MUNICIPAL RESEARCH

Horace L. Brittain, Director

(Continued from last issue)

DIVISION OF PUBLIC HEALTH NURSES.

WHAT IT IS.

HE Division of Public Health Nurses constitutes the vital connection between the Department of Health and the homes of the city. The health nurses are at once the home scouts, the ambulance corps and the guide-philosopher-friend squad of the city's army of health promotion and disease and death prevention, known as the Toronto Department of Health.

WHAT IT DOES.

The work of the division is distributed under five main functions:

- 1. Tuberculosis work.
- 2. Child Welfare work;
- 3. Co-operation with other divisions of the Health Department.
- 4. Co-operation with other nursing organizations.
- 5. Co-operation with private or semiprivate social and mdeical organizations.

I. Tuberculosis-

The division issues city orders for admission to the Toronto Free Hospital for as need visits from the health nurses.

Consumptives, the Muskoka Free Hospital for Consumptives and the Queen Alexandra Sanitarium near London.

A health nurse is present at the tuberculosis clinics of the Hospital for Sick Children, which are held twice a week.

In co-operation with the social service, nurse of the Heather Club, the division sends children who have been exposed to tuberculosis to the Preventoria of the Daughters of the Empire and of the Heather Club.

The health nurses also co-operate with the social service nurse of the Samaritan Club through the Neighborhood Workers' Association.

Each week the Medical Inspector of Schools is given the names, etc., of all children coming under the nurses' notice, during the preceding week, who have been exposed to tuberculosis.

The division co-operates in six tuberculosis clinics per week, as follows:

- 2 at the Toronto General Hospital.
- 2 at the Hospital for Sick Children;
- 1 at St. Michael's Hospital;
- 1 at the University Settlement.

Physicians notify the division of all cases of tuberculosis, specifying such cases

A quite unusual feature is that the majority of cases visited by the health nurses are under the care of private physicians.

The Sanitoria send a daily report of admissions and discharges to the Division

of Health Nurses.

In fine, the nurses co-operate with the Division of Communicable Diseases in securing fumigation when necessary, give home instructions in nursing, assist with bedside nursing in emergency, distribute sanitary supplies, refer cases to hospitals, and secure the attention of social agencies, through the Neighborhood Workers' Association.

A leading Toronto medical authority on tuberculosis states: "No real advance was made in the handling of tuberculosis until the City Health Department secured the registration of tuberculosis cases. Since that time rapid progress has been made through the policy of co-operation pursued by the Health Department." credit for the success of follow-up work should be given to the Divisions of Health Nurses, Child Hygiene and Public Service.

II. Child Welfare-

Under this head the health nurses conduct work in connection with ten wellbaby clinics, ten mothercraft classes and prenatal instruction, and co-operate actively with the Hospital for Sick Children. Well-baby clinics and mothercraft classes are conducted at the following centres, in co-operation with institutions not connected with the Health Department:

The Hospital for Sick Children.

The McCormick Playground.

The West End Creche.

The Boon Avenue Public Library.

The Victoria Street Creche.

The Memorial Institute.

The Evangelia Settlement.

The University Settlement.

The Riverdale Settlement.

The Perth Avenue Public School.

St. Christopher House.

The River Street Creche, and

The Seaton Street Dispensary.

The health nurses are the field agents of the Divisions of Public Service and

Child Hygiene, making careful investigation under the direction of the former, and taking charge of the nursing end of the well-baby clinics for which the Child Hygiene Division is co-operatively respons-

At the Hospital for Sick Children a medical clinic is held every morning, tuberculosis clinics on Wednesday afternoons and Saturday mornings, and wellbaby clinics on two afternoons per week except during the winter months, when a mothercraft class will take the place of one of these clinics each week. At all the clinics health nurses are in attendance. The mothercraft classes are taken charge of week about by the health nurses and instructors from the Technical High School.

The nine other well-baby clinics and mothercraft classes are conducted in the same way as at the Hospital for Sick Children in co-operation with the agency supplying the rooms for the work and with the Technical High School, which assigns

teachers of household art.

The health nurse who attends the daily medical clinic at the Hospital for Sick Children transmits all orders of the hospital doctors to the district nurses, through the four district supervisors. trict nurses visit the homes concerned and give the necessary help and instructions to ensure that the orders are intelligently and carefully carried out. Babies in medical wards are reported to the Health Department on admission and discharge in order that they may be visited promptly by health nurses.

The West End Creche is visited daily by a health nurse and the parents of the children who attend the nursery are visited by one of the nurses of the district in which the particular homes are situated.

A class of Girl Guides at the West End Creche has been given practical instruction in the care of babies-actual living

babies being the models.

The President of the Board of the Victoria Street Creche has asked that co-operative relations be established with the Board of Health.

At the West End Creche, before any child is admitted, a nurse makes a social study of the home concerned under the direction of the Division of Public Service. Prenatal Care and Co-operation With Hospitals in Obstetrical Cases.

As a matter of co-operation the Obstetrical departments of the various hospitals report the discharge of all babies to the Health Department. The mother of each one of these babies is reached either by literature or visit. The four supervisors turn in monthly reports of each baby visited for the first year of his life.

Prenatal cases discovered in the general health visiting are recorded at once and the nurses see that medical and nursing visiting nurses all literature prepared by the Child Hygiene Division together with the programme of the nearest well-baby clinic. Nurses are assigned to visit mothers at the discretion of the district supervisors.

III. Co-operation with Other City Departments—

The health nurses visit employes of the Works and Street Cleaning Departments* who are absent on account of sickness and reports are sent to the heads of these departments as to the seriousness of the ill-



Interior view of divisional office of Public Health Nurses located in Police Statien No. 11.

An excellent example of how two great Civic Departments may co-operate with advantage to the city.

care is provided, if not by the family, then through the Neighborhood Workers' Association. Where necessary, arrangements are made for hospital care at the Toronto General Hospital, which maintains the only prenatal clinic in the city.*

Notice of all births reported by the City Clerk are sent to the district supervisors, who see that all mothers receive from the ness. This work was undertaken as an alternative to discontinuing entirely sick-leave in these departments. The saving to the city is probably considerable.

Two of the district offices are located at police stations, in which spacious, welllighted and heated and convenient rooms are placed at the disposal of the health nurses as lunch and rest rooms and as de-

^{*}Since writing the above St. Michael's Hospi-tal has established a prenatal clinic, which a health aurse attends daily,
*This service has recently been extended tooll departments.

positories of records and places to fill out daily reports. This form of co-operation is particularly desirable, and much credit it due to the Police Department for permitting an innovation which should spread widely in the City of Toronto, to the end that mutually sympathetic and co-operative relations should be established between all servants of the people, and that expenditures for rent, buildings and equipment should be cut down to the lowest level possible.

DIVISIONAL ORGANIZATION.

The city is divided into 19 divisions, which are grouped into four districts, each presided over by a district supervisor. The lines of the districts are so drawn as to conform to the boundaries of the nine Neighborhood Workers' Associations in which the district supervisors have membership.

The following, from a paper recently read by the head of the division, describes succinctly the general organization of the

division:

"The organization of the nurses requires detailed description. In 1908, Toronto employed one nurse in charge of a tuberculosis clinic in the Toronto General Hospital, and in May, 1911, appointed a second to enforce the notification of tuberculosis. In February, 1914, we had nine tuberculosis nurses. In July, 1912, the Board of Health ordered that child welfare nurses should be appointed under the same superintendent. In February, 1914, there were eight child welfare nurses. No provision for medical work was made by the city for either tuberculosis or child welfare divisions, but the nurses were placed as assistants to existing agencies. Two groups of equally trained nurses, with two filing systems, reporting to one office and one superintendent of nurses; spending much time and money on the street cars, visiting frequently in the same homes, and co-operating with the same social agencies, seemed to be poor administration. We decided to specialize in homes rather than in diseases and to safeguard the interests of the medical specialist by office organization rather than by multiplication of health visitors. Reorganization was effected in February, 1914.

"A nurse in charge of a central office

refers telephone messages to district offices. receives patients seeking hospital orders, and reports the homes to the district office, supervises the works of clerks in charge of records and supplies and relieves the superintendent of miscellaneous detail. Another nurse co-ordinates the work of the Hospital for Sick Children with that of ten well-baby clinics. The remaining 27 nurses work in four groups, meeting at noon in offices placed in two police stations, the University Settlement and a civic recreation centre. The duties of the supervisor of each group varies with the nature of the district. The supervisor of nurses working in the congested area surrounding the University Settlement may usually be found in her office from 9 a.m. to 5 p.m., while the other three assume more district work. Each assistant nurse is responsible for a given area, its clinics, its home and, to some extent, for its backyards. The neighborhood needs which she cannot meet must be referred to the supervisor, for we never assume that sanitary inspectors or social agencies will find abnormalities without our help.

"At nine o'clock the nurse makes her first visit, at eleven-thirty she reports to the office, at two o'clock returns to the district and leaves the district at five o'clock. Her work includes clinics, day nursery and civic investigations, tuberculosis, contagious and infant nursing, arrangements for hospital admissions and miscellaneous visiting. Obstetrical and bedside nursing, other than tuberculosis and contagious, may be referred to the Victorian Order of Nurses at the discretion of the supervisor. At noon she enters notes on her histories; writes her daily report; receives new work, and, in her turn, prepares lunch for the rest of the group. The noon hour lunch time is the nurses' opportunity to meet the social workers of the district, and is the superintendent's opportunity to meet

her nurses."

RECORDS AND REPORTS.

The basal card records of the Division of Health Nurses are nine in number:

- 1. The family card containing general data:
- 2. The individual tuberculosis card;
- 3. The individual prenatal card;
- 4. The individual infant welfare card;

- 5. The individual child's general card:
- The individual contagious disease card;
- 7. The day nursery card (Public Service Division);
- 8. The social record (No. 2) card (Public Service Division);
- 9. The Hospital card.

These records are very full and complete and supply a good basis for administrative control. In a few places, perhaps, the time required in filling out might be shortened by making it possible to use check-marks instead of writing.

The daily report of the nurses, to the district supervisors, is extremely full and complete. It is in effect a very detailed time sheet and could be made-what it is not now-the basis for functional cost accounting. These reports are the basis for the daily reports of the district supervisors to the central office. On the family eards, duplicates of which are sent daily to the central office, and on the district supervisors' reports, are based the monthly record which is entered up daily in a "Summary Book" kept in the central office. Duplicate records on identical forms are kept at the district offices. For several months there were discrepancies between these records in the central office and those in the district offices, which had to be written off each month and a fresh start made. This is demoralizing to nurses who have been trained to habits of accuracy. Recently the form of record has been revised with good results; but a further change is necessary so that daily balances can be struck and all errors caught at the beginning. This would ensure final accuracy and would save a great deal of time spent fruitlessly at the end of the month in attempting reconciliation.

Again, the central record should be largely for control and therefore need not be so detailed as the district records. This would decrease loss of time through duplication.

It is recommended that a careful study be made of the daily report form of nurses to ascertain if time in filling out cannot be saved by use of the check-mark and to decide whether details of the nurses' work should be included, except in "key" form, inasmuch as the record cards contain all essential facts.* The investigator thinks

that the work of filling out the report can be cut in half. When it is considered that entering up of records and making of reports may consume, per nurse, one and a half hours daily, the importance of this recommendation is evident. A reduction of 50 per cent. would mean the saving of three nurses' work per day, or the daily field work per nurse might be increased from five and a half hours to six and a quarter hours. The field work is the essential part of a nurse's work. The recording and reporting are only means to an end.

It is further recommended that a careful study be made of the feasibility of employing stenographers at each of the four district offices. This would, of course, necessitate the purchase of four typewriters; but as an offset to this capital expenditure the following possible advantages might be noted:

1. The family cards might be written in duplicate on the typewriter (mechanically this is perfectly feasible).

2. The stenographer might keep all books of record and prepare the monthly report under the direction of the district supervisor, setting free the latter for more important work;

3. The stenographer, with assistance, might also take charge of the telephone, so that the district supervisor might be able to devote more time to field work and supervision.

The employment of four stenographers, and simplifying the records and reports. would add greatly to the efficiency of the division and would probably save the time of three nurses (annual net saving, \$300, allowing \$900 per annum for a nurse or \$600 per annum for a stenographer). If additional stenographers were employed and the present nursing force maintained, its effectiveness would be further inereased by about 15 per cent. It is probable also that recording and reporting work would be more satisfactorily done if done by persons trained specifically for the work. Nurses are more highly paid and more expensively trained than stenographers or clerks and should be utilized to the full in performing the work they alone can perform, and should not be used on clerical services which can in any way be avoided.

^{*}Shortening the nurses' reports has been ef-fected except in case of new nurses, where the fullest details are necessary for the use of the uperintendent of nurses in nurse training.

OFFICE ACCOMMODATION.

The division occupies two rooms, the outer 19 ft. 9 in. x 13 ft. 7 in. and the inner 9 ft. 8 in. x 13 ft. 7 in. The outer room has two windows and the inner one window, all opening on a court. The natural lighting is entirely inadequate. Owing to the shape of the inner room, one occupant must work with her back to the light and another with the light coming over her right shoulder. Two workers doing clerical work in the outer room must also be improperly placed with relation to the light. Even with artificial lighting the desks furthest from the windows are insufficiently lighted. The ratio of lighting to floor area is, in the outer room, only about 1.15 and, in the inner office, about

There are 350 cubic feet of air space per occupant of the outer room during most of the day, and 310 for each occupant of the inner room. The minimum should be at least 500, the standard of the Health Department for housing. The ventilation is entirely by window, the ventilating system being inoperative in these rooms. The installation of Pullman ventilators will give sufficient and safe ventilation.

The very small room next to the inner room is occupied by stenographers doing work for other divisions. The only way of entrance to or exit from this is through the office of the Superintendent of Nurses. The noise from this room is deafening and renders work in the adjoining office al-

most impossible.

The desk and other equipment seems to be fairly satisfactory, but in no other respect is the accommodation such as to do credit to the city. The city is obtaining a great deal more value from its expenditure on health nurses than it has a right to expect, as the service is rendered, to some extent, at the expense of the vitality of city employes. The Department of Health is practically forced to allow health conditions which it should not tolerate.

INCREASED STAFF.

Two additional nurses are required; one able to speak Italian and German*, to assist in clinics attended by foreigners, and one additional district nurse, that is, of

course, if it is found undesirable to supply elerical help at the district offices.

Still more nurses would be required in the event of:

- 1. An increase in day nursery work;
- 2. An increase in baby clinic work;
- An increase in centres for tuberculosis medical work;
- An increase of the department's cooperation with the out-patients' departments of hospitals.

An investment in the conservation of human life through educational work with mothers, and preventive work with children, etc., will bring as large a return to the city as any investment could. The saving of a child for efficient living is more important than the saving of an adult life for a few years of perhaps inefficient living. The true road to economy in hospital, police, prison and reformatory administration lies through increased efficiency in and, when necessary, appropriations for child welfare and tuberculosis work. It is to be hoped that at least adequate and suitable accommodation will be furnished to the Health Nurses Division forthwith.

In conclusion, the Bureau of Municipal Research is satisfied that the health patrol of the Health Department is doing exceedingly efficient work, that its adoption of the co-operative principle is enabling the city to obtain many times the service it could possibly obtain by the expenditure of the same money on absolutely independent work, and that any changes necessary in internal routine can easily be made by the division itself in consultation with the departmental statistician, who is well versed in the devising of keys and forms.

DIVISION OF PUBLIC SERVICE. WHAT IT IS.

The Division of Public Service supplies the point of contact between the Health Department and the various social agencies of the city, public and private. Its main objects are to insure that individuals and families needing medical assistance are supplied with the necessary physical conditions to render medical assistance effective, and to promote economic and social betterment for purposes of conserving human health and efficiency.

^{*}A nurse speaking Italian has already beenobtained.

WHAT IT DOES.

As the director of the division is secretary of the Central Council of the Neighborhood Workers' Association, the division occupies an extremely strategic position in bringing together the supply of and demand for social service. As eases requiring social treatment are reported by the health nurses, who act as the field agents of the Public Service Division in social service work, or by others, the proper attention is secured either through one of the local Neighborhood Workers' Associations or through some particular social agency known to be directly interested.

To prevent duplication of work and the exploitation of social service by unworthy individuals, reports are sent regularly to the Confidential Exchange of the Social Service Commission. All cases requiring social treatment which are investigated by Health Nurses are supervised by the Director of the Division of Public Service.

As secretary of the Council of the Neighborhood Workers' Association and a representative of the Department of Public Health, the Director attends and addresses meetings of associations of all kinds which have a social outlook. In fact, the division is in a position to co-operate with every social agency in the city which welcomes its assistance.

CO-OPERATION WITH OTHER DIVISIONS.

As has been indicated, practically the whole work of the division is co-operative. From this fact it derives its chief value. It not only helps focus the whole resources of the Health Department on individuals or families, but it prevents a great deal of waste motion in a field where waste motion is chronic, i.e., the field of social service and so-called uplift work. The division has been largely instrumental in introducing the idea of efficiency into social service, where misdirected sympathy and ineffective sentimentality have too long reigned supreme.

INTER-DIVISIONAL CO-OPERATION.

The nurses of the Division of Public Health Nurses act as the field agents of the Division of Public Service. This elimin-

ates a great deal of duplication and waste energy through lack of contact between the related Divisions of Public Service, Child Hygiene and Health Nurses. discipline of the nurses is, of course, absolutely in the hands of the Superintendent of Public Health Nurses. Nurses report to the Public Service Division on social cases and the Director of Public Service makes assignments by telephone through the four district supervisors of the Division of Public Health Nurses. A more ideal case of effective co-operation could hardly be imagined, and the directors of both divisions are to be congratulated on the arrangement.

The work of the nurses co-ordinates automatically the work of the Divisions of Child Hygiene and Public Service.

When a nurse reports a social case where a communicable disease has developed, a report is made immediately to the Division of Communicable Diseases and For example, if diphtheria Quarantine. has developed and the patient cannot be removed to the Isolation Hospital, an inspector reports the case, with a note on the special nourishment required. The Chief of the Division of Communicable Diseases and Quarantine, if necessary, then makes out an order for these things, which are supplied by the Department of Health after receiving the O.K. of the Relief Officer.

There is considerable co-operation by the Division of Public Service with the Division of Sanitation, especially with its Municipal Housekeeping Branch, which reports cases needing social treatment.

The Division of Housing and Industrial Hygiene reports similar cases to the Division of Public Service.

The outside co-operation of the division takes in churches, settlements, missions, nine Neighborhood Workers' Associations, the Juvenile Court and the Children's Aid Society. In simple cases the appropriate church or social agency is communicated with. Complex cases are handled through the Neighborhood Workers' Associations, special cases being held over for discussion at their weekly meetings.

In addition to this an immense amount of consultation work is done by the director inside and outside of his office.

OFFICE ORGANIZATION.

As there is but one regular employee in the division, there is little need of office organization.* Simple records, such as telephone assignments, are kept; but the basal social records are, for obvious reasons, filed with the health nurses' records.

OFFICE ACCOMMODATION.

The Director occupies one-half of a room 9 ft. 6 in. by 13 ft. 13 in. by 11 ft. high. The single window affords 35½ square feet of lighting space, which is a satisfactory amount. One-seventh of the air space is occupied by furniture.

NEEDS OF THE DIVISION.

Not much, if any, additional equipment is required.

A private room, however, is absolutely essential, on account of the nature of the work

An assistant capable of taking the director's place when he is out of the office should be provided.*

GENERAL RECOMMENDATIONS.

The duties of the City Relief Officer should be merged into those of the Public Service Division of the Department of Public Health. This would eliminate a great deal of going back and forth and would relieve the work from the stigma of charity.

It is a question worth discussing whether most of the work of the Social Service Commission is not so nearly allied with that of the Division of Public Service of the Department of Public Health that a merger should be effected. At present the Commission has no medical and no public service inspector, simply an accountant who looks into the business arrangements of institutions looking to the city for funds. A thorough expert survey of the actual community service performed by these institutions is at least as essential as an inquiry into their accounting procedure. The Department of Public Health already possesses all the machinery necessary in its Public Service and Medical Divisions.

At present, orders for admission to various institutions are issued by two separate divisions of the Department of Public Health. As no order should be issued

without the investigation and consent of the Public Service Division, the work would be unified and greatly facilitated by entrusting the issuance of all orders to the Division of Public Service.

A survey of the Health Department shows that the employees of all divisions have already largely adopted the social point of view. The heads of two of the inspection divisions hold frequent conferences with the Director of the Public Service Division. This socializing of the department would be greatly facilitated if the Division of Public Service were to be strengthened so as to be at least equal in administrative importance to any division of the department. Social work is fundamental to the work of the Department of Public Health. Its work is largely negatived if children are being prepared to be public charges through continued undernourishment, insufficient clothing, drunkenness in the home, or other untoward social conditions. Preventive medicine to be effective must start at the beginning. The beginning is in the home where the department can reach the coming wageearners and the mothers, grandmothers and remote ancestors of coming genera-Increased expenditure on social service will mean decreased expenditure on jails, hospitals, asylums, fire departments and the various other negative sides of community life.

DIVISION OF CHILD HYGIENE. WHAT IT IS.

This division is in control of the medical side of the child welfare work conducted by the Department of Health. While the division is still in the formative period, it is clear that its chief function will be the application of preventive medicine to diseases of children in order to reduce the infant mortality of the city. If the health nurses constitute the health patrol of the city, the Division of Child Hygiene constitutes a life-saving station for infants Through its in danger of shipwreck. work in the conservation of human resources by saving lives which have still their full course to run, the division is engaging in a work even more important than the conservation of natural resources as usually interpreted.

^{*}The division now has three regular employees.
*This has been very adequately taken care of by the appointment of a competent assistant.

WHAT IT DOES.

The Division carries on correspondence with charitable institutions, medical colleges, medical societies, etc., with the end in view of keeping the department up-to-date in its child hygiene work.

It arranges for the attendance of volunteer physicians at well-baby clinics.

It prepares all child welfare literature issued by the department.

It conducts all extension work, and is represented at important conventions and annual meetings of various institutions

vate organizations, are under the medical supervision of this division. The Director attends two children's clinics per week at the Hospital for Sick Children. Any tuberculosis cases discovered at the well-baby clinics are referred to the Hospital for Sick Children.

Milk Depots.

The seven milk depots in the city, in connection with private organizations, are supplied from the pasteurizing plant of the Hospital for Sick Children. The physicians who have charge of the clinics, in co-operation with the Division of Child



WELL BABY CLINIC. ST. CHRISTOPHER HOUSE.

for the care of children.

The division conducts an educational campaign through the well-baby clinics and mothercraft classes, co-operates with the Hospital for Sick Children and the obstetrical departments of six city hospitals.

Clinics.

The ten well-baby clinics which are conducted in co-operation with various pri-

Hygiene, prescribe the formulae for feedings, which are made up by the hospital and distributed from the seven milk depots. Individual formulae are invariably used. Where ice is necessary, and parents are unable to pay for it, it is ordered by the physician, and is supplied, if possible, from a small fund in the hands of the Director of Public Service. The deficit, which amounts at the present time to \$500, is paid by the Health Department.

Mothercraft Classes.

Of the twenty-four lectures at each centre, three are given by the doctors in charge of well-baby clinics. These lectures cover first aid, infant feeding and prenatal care. These form an important part of the campaign for the reduction of infant mortality.

CO-OPERATION WITH OTHER DIVISIONS.

The co-operation between this division and the Division of Health Nurses is very close and effective. Public health nurses are agents of the Director of Child Hygiene for the purposes of his field work. Two nurses give their entire time to the work of the Child Hygiene Division; but all report and are directly responsible to the Superintendent of Public Health Nurses. This is, of course, as it should be, eliminating much duplication, loss of information and even perhaps working at cross purposes.

All assignments to nurses for child hygiene work are made directly by the Superintendent of Nurses on memo from the

Director of Child Hygiene.

The team work between the Child Hygiene and Vital Statistics Divisions is also close. The effectiveness of the work of these health nurses who act as the field agents of the Child Hygiene Division is largely determined by the vital statistics which are made continuously available.

The Public Service Division sees to it that the wants of children who need clothing to be able to attend the clinics are pro-

vided for.

There is occasional incidental co-operation with the Division of Communicable Diseases and of Dental Clinics.

CO-OPERATION WITH OUTSIDE OR-GANIZATIONS.

The division co-operates with the College of Physicians and Surgeons by reporting to them, for prosecution, cases reported by the health nurses of the practising of midwifery, which the Statutes of the Province make illegal. The prosecutions are made by the College, although with little success, at least until recently.

The director of the division is Secretary of the Milk Commission of the Provincial Academy of Medicine. The Academy has

the sole right and duty of certifying milk and affixing the necessary seals.

There is also co-operation with the Juvenile Court. When a nurse or doctor at a clinic discovers a case of child neglect, report is immediately made to the director. The diagnostician then passes on the case and directs prosecution, if necessary.

As is evident throughout this report, the co-operation with the Hospital for Sick Children is close and continuous. One of the most important points of contact is the custom of sending babies brought to the well-baby clinics, but needing medical attention, to the Hospital for Sick Children for treatment in the out-patient department.

During the summer months, through cooperation with the Toronto Ferry Co., a baby boat is provided for children who are not thriving, but are not sick enough to be sent to the Hospital for Sick Children. Trips are provided every afternoon all summer. This valuable work should be continued and enlarged.

RECORDS AND REPORTS.

The records of patients kept by the division are, as is proper, kept with the family and individual records of the Health Nurses Division. These and other records of the division seem to be satisfactory. An interesting record is that of still-births, which contains the names of the officiating physicians. No use is made at present of this information, but after it has been conducted for some years should provide a good deal of useful information.

OFFICE ACCOMMODATION.

The division, which consists of the director, employed on the half-time basis, occupies one-half of a table in the office of the Superintendent of Health Nurses, which was formerly used as a prison cell. There are no drawers in the table for the use of the division.

NEEDS OF THE DIVISION.

The division needs a small separate office with suitable office equipment. There should be a separate telephone.

For fullest efficiency the birth registration law needs to be thoroughly enforced. The present law is 44 years old; but no record can be found of a conviction under it, although the law is broken

daily. A payment of 25c. for each notice of birth sent by physicians, together with prosecution for non-registration and nonnotification would probably effect a great change. If the death rate for babies is to be cut down to a minimum all births must be reported immediately. A delay of even two days often means death through neglect or ignorance.

A provincial law should be passed requiring that a minor applying for a work certificate should first get a certificate of health from the city Health Department.

Thorough medical inspection in the High Schools and Separate Schools would undoubtedly cut down child and youth mortality.

STEPS IN ADVANCE TO BE TAKEN.

The number of well-baby clinics is to be increased from 10 to 25, one baby clinic to every 20,000 population. Public School buildings are the natural centres for the greater part of this work, as they are already owned by the people. It is hoped that arrangements can be made with the Board of Education toward this

If it could be further arranged that the Health Department during the summer months, when infant mortality is highest and the medical inspection staff of the schools is not employed, should have the co-operation of the physicians and nurses of the Board of Education, it would mean a tremendous increase in the extent and effectiveness of the baby clinic work.

It is planned to form a Children's Council at the beginning of the year 1915, made up of representatives of all institutions in the city doing child welfare work. This would mean much for the city's policy regarding child hygiene, as the Health Department would thus seeure the co-operation of all people most vitally interested in child welfare work.

GENERAL RECOMMENDATION.

The work of the Department of Health in inspecting baby and maternity homes is not now a part of the Child Hygiene Division. This work is now done on a part time basis. As the Division of Child Hygiene is also on a part time basis, the combination of these distinct divisions which belong naturally together under a full time director, would, without added cost, add greatly to the efficiency of the department.

If thought undesirable for various reasons to change the present arrangement, the greater part of the good resulting from a merger could be obtained by having the Director of Child Hygiene and the Inspector of Baby and Maternity Homes established in the same office with an arrangement for regular daily or semi-weekly conferences.

The inspection of incorporated infants' homes should also be placed in the hands of this Division. This is important work, for which the city is morally responsible, and legislation should be sought author-

izing the necessary change.

DIVISION OF MATERNITY AND BABY HOMES.

WHAT IT IS AND DOES.

This division was established in 1898. following the passage of an Act by the Provincial Legislature in 1897, to "Regulate Maternity and Boarding Houses and for the Protection of Infant Children."

The objects of the division are thus stated by the Inspector of Maternity and Baby Homes:

1. "To provide a shelter for unfortunate girls who are about to become mothers and to shield them from the abuse and contempt which so often are cast upon such sufferers. By so doing, we seek to enable them to return in due time to their homes or their former places of employment, and resume their work as useful members of society.'

2. "To give them good nursing, under medical direction, during the time of parturition and immediately after, so as to save their lives and health, and the lives and health of their offspring.'

3. "To provide temporary homes for the infants of unfortunate mothers during the first three years of life, and where the mother cannot retain her child, to secure for it a good foster home, where it may grow up as a member of the family, unscarred by the accidents of birth.'

There are 14 maternity homes and about 50 baby homes. With the two incorporated Infants' Homes-St.

cent's and St. Mary's Street-the division has no relations.

The following statistics, covering a period of three years, have been kindly supplied by the inspector:

Baby Homes.

	Cared for	Deaths of Ba	bies
1911	68	13	19.11%
1912	80	11	13.75%
1913	110	19	17.27%
	-	_	
3 years.	258	43	16.66%

Maternity Homes.

1911—					
	Patients	Infants	Still- born	Deaths of Bables	Deaths of Mother
1	. 1	1			
2	23	21	1		
3	. 15	14	1		
4	. 3	2	1		
5	. 11	10		2	
6	. 10	10			
7	. 31	30		1	
8	. 48	47		1	1
9	. 6	5			
10	. 9	7			
11	. 7	7			
12	. 1	1			
13	. 25	22	1	(Misc.)	
14	. 14	12	1	1	
	204	189		1 4	1

Maternity Homes.

1912 -						
	Pa	tients	Infants	Still- born	Deaths of Babies	Deaths of Mothers
1 .		24	24	2 (Mise.)	
2		22	19		1	
3		17	13		2	
4		10	9	1	2	
5		42	40	1	1	1
6		38	36	1	1	
7		14	14	1	1	
8 .		12	10			
9 .		4	3			
10 .		29	27			
11 .		8	5		1	
12 .		32	27	3	1	
	-	050	007		1 0	
		252	227	9	1 9	1

Maternity Homes.

1913—					
	Patie	nts Infants	Still- born	Deaths of Babies	Deaths of Mothers
1	20	0 18	3	4	
2		2 2			
3	10	0 10	1	2	
4	20	0 17		3	
5		3 3			
6	10	0 10	1		
7	4	2 2			
8	4'	7 45			
9	!	9 8		2	
10	1	9 16	1	3	
11		5 5		1	
12		8 7		1	1
13	3	8 34	2	2	
14	3	0 28		4	
15	3	6 34	1	2	
	25	9 239	9	24	1

3 years, 715 patients, 3 deaths..... 4% 3 years, 655 babies, 37 deaths....5.65%

These figures indicate that much good is being done by the division in supplying care in maternity homes for mothers and infants who, in many cases, are exposed to great lack of care and even positive hardships, leading frequently to death or impaired health.

DIVISIONAL ORGANIZATION.

The one employe of the division is the inspector, who gives part time service to the work. There are no records to show how much time is given. On his rounds he visits maternity and baby homes, paying particular attention to those where conditions are most apt to become undesirable.

All babies in the baby homes are bottle-fed, their feeding being supervised by the inspector. The actual feeding is done by the women in charge of the homes. These are untrained, but most of them are mothers. As a rule not more than two babies are allowed in each home.

No score cards are used in the inspection of maternity or baby homes.

The inspector tries to place as many babies as possible in homes which will adopt them. He is now working on a scheme providing for the adoption of all illegitimate children into private homes at the earliest age possible.

While no illegitimate child is ever really left without care, the fact that the city assumes no financial responsibility in the matter sometimes makes it extremely difficult to secure proper care. A baby is occasionally left on a nurse's hands with no provision by the mother or father for the child's upkeep. Rarely have nurses in such cases refused to continue to care for the babies, at least until some other provision could be made.

The inspector reports weekly to the Medical Officer of Health.

CO-OPERATION.

No arrangement exists for regular visiting of maternity and baby homes by health nurses.

Nurses in maternity departments of the various hospitals occasionally consult the inspector regarding having a child placed in a baby home.

OFFICE ACCOMMODATION.

The inspector conducts most of the business of this division in his private office, where he occasionally has children brought for examination.

Once a week he goes to the office of the Department of Public Health and writes up his records. The office accommodation consists of a board across a window and the floor space contiguous to it. This board is also used by the Division of Meat inspection and the Division of Plumbing and Drainage.

FFCCMMENDATIONS.

The use of score cards in the inspection of maternity and baby homes should be considered.

The work of this division is fundamentally child hygiene work and should be incorporated with the Division of Child Hygiene. If complete incorporation is impossible, the two related divisions should at least be given office space together and regular conferences should be arranged as experience warrants. At present the connection of the division with the Department of Public Health is a rather loose one, and something should be done forthwith to make the relation more vital. Only the great interest taken in the work by the inspector makes the present arrangement workable.

(To be continued)



MILK SUPPLY IN RELATION TO TUBERCU-LOSIS IN ONTARIO

By JOSEPH RACE

City Bacteriologist, Ottawa

NDER the title of "The Milk Supply as a Casual Factor in Relation to Tuberculosis" there has recently appeared an article in the Journal of State Medicine (Nov. and Dec., 1914) which should be carefully read by all who are interested in tuberculosis. The article is by Professor Sheridan Delépine, of the Public Health Department, Manchester University, and who is probably the greatest authority in Great Britain on this phase of the etiology of tuberculosis. The writer proposes to give a short abstract of this paper and afterwards to compare the data where possible, with similar data based on the returns for the Province of Ontario.

The first section of Delépine's paper briefly reviews the earlier work on the transmission of bovine tuberculosis, and concludes with the following quotation from the final report of the Royal Commission on Tuberculosis: "There can be no doubt that primary abdominal tuberculosis, as well as tuberculosis of the cervical glands, is commonly due to ingestion of tuberculous material. A considerable amount of tuberculosis of childhood is to be ascribed to infection with bacilli of the bovine type transmitted to children in meals consisting largely of the milk of the cow."

The second section deals with evidence based upon age incidence, distribution of lesions, and history of cases, and the third section with the evidence based upon the pathogenic activity, the cultural characters, and the properties of the bacilli isolated from tuberculous lesions. From this evidence Delépine deduces:

- (1) That an exceedingly small number of children are tuberculous at birth.
- (2) That soon after birth they begin to contract the disease.
- (3) That the nature of the tuberculous lesions and their distribution show

that before the fifteenth year the alimentary passages are important channels of infection and that after the fifteenth year infection generally takes place through the air passages.

- (4) That when the matter has been investigated, it has been found that among children suffering from tuberculosis other than pulmonary tuberculosis a great number have been fed on unsterilized cows' milk.
- (5) That from the lesions of children fed on unsterilized cows' milk, bacilli resembling those associated with bovine lesions are found in the great majority of cases.
- (6) That both the distribution of the lesions and the characters of the bacilli seem to indicate that not less than 20 to 25 per cent. of the cases of infantile tuberculosis are attributable to infections through cows' milk, and that some results indicate a much higher proportion.
- (7) That experimental evidence shows that the ingestion of tuberculous cows' milk is followed by infection through the alimentary canal in the great majority of mammals on which the experiment has been made.

In the fourth section the evidence, based upon the effects which a reduction in the amount of tuberculous milk supplied to a community has upon the infantile mortality from tuberculosis, is discussed.

The examination of the milk supply of Manchester for B. Tuberculosis was commenced by Delépine in 1896, and since that date several thousands of samples have been examined. The percentage of infected samples for each year was as follows:

Manchester mixed milk collected at railway stations and other places.

	Num of San Exam	aples	Num Tuber ou	real-	Perce	
1897-1899	110		19		17.2	
At beginning		110		19		17.2
1900	358		40		11.1	
1901	440		43	1	9.7	
1902	424		38	1	8.9	
1903	430		51	1	11.8	
1904	425		43		10.1	
First 5 years		2077		215	-	10.3
1905	757		60		7.9	
1606	704		47	1	6.6	
1907	722		43	1	5.9	
1908	341		30		8.7	
1909	649		36		5.5	
Second five years		3173		216		6.8
1910	534		32		5.9	
1911	611		35		9.0	
1912			67		11.5	
1913			67		11.2	
Last four years	-	2321		221		9.0
Totals		7681		671		8.7

This table shows the excellent results obtained by the campaign against tuberculous infection of milk supply up to the year 1910, since when, as Delépine points out, there appears to have been a recrudescence of cattle tuberculosis in that district. It is also shown that the infectivity of tuberculous milk has been reduced, for in 1896 nearly 20 per cent, of the mixed milk samples producing lesions on innoculation also gave positive results by the microscopical method, whereas in

1914 only 3 per cent. of similar samples gave positive results.

In order to ascertain the effect of this reduction of infectivity up to 1910, with the subsequent relapse, tables of mortality rates were prepared and the following one, prepared by the writer from these, shows the essential figures. The general death rate is added for comparison and for the purpose of ascertaining what proportion of the reduced tuberculosis rates may be due to general improvements in sanitation.

As pointed out, these tables show that during the years when the infectivity of the milk supply was declining, the rate of improvement in the mortality rate due to tuberculosis other than phthisis, was increasing more rapidly than the general death rate and that a relapse occurred with the recrudescence of bovine infection.

He concludes: "It appears to me reasonable to say that, although there is not complete agreement in the results obtained by various observers as to the exact amount of human tuberculosis attributable to the consumption of tuberculous cows' milk, there is clear and cumulative evidence that cows' milk plays a very important part in the production of infantile tuberculosis in England and Scotland."

The question now to be considered is how far these conclusions are applicable to conditions in Ontario.

MORTALITY RATES, MANCHESTER.

D- 1-1	Death Rate per 1,000 of Total Population.			Death Rate per 1,000 of Population under 5 Years.			Death Rate per 1,000 Births of Children under One Year		
Period or Year.	All Causes	Phthi- sis	Other forms of Tuber- culosis.	All Causes	Phthi- sis	Other Forms of Tubercul- osis	All Causes	Phthi- sis	Other Forms of Tubercul- osis
1881-1885	23.6	2.42	0.92			****	*****		
1886-1890	24.6	2.24	0.95						
1891-1895	23.6	2.09	0,97	81.7	0.36	6.38	186.4	0.28	11,05
1896-1900	22.7	2.04	0.82	81.9	0.44	5.19	192.1	0.46	9.16
1901-1905	20.1	1.94	0.71	68.7	0.33	4.10	172.8	0.25	7.42
1905-1910	17.7	1.65	0.59	56.8	0.39	3.22	147.3	0.31	5.19
1911	17.1	1.56	0.52	53.1	0.20	2.57	156.1	0.27	3.87
1912	16.2	1.53	0.54	47.7	0.27	2.68	122.3	0.17	3.42
1913				47.2	0.41	2.48	128.7	0.42	4.25

Table No. 3 gives similar statistics prepared from Delépine's tables for England and Wales.

TABLE NO. 3.

MORTALITY RATES ENGLAND & WALES

Period or	Death Rate per 1000 of total population			per 1000 of pop- der five years	Death Rate per 1000 births under one year		
Year	All Causes	Phthisis	Tubercu- losis other than Phthisis	All Causes	Tuberculosis other than Phthisis	All Causes	Tuberculosis other than Phthisis
1891-1895 1896-1900	18.72 17.68		0.66)	57.7	3.93	153	7.92
1901-1905	16.00	1.21	0.52	49.3	3.11	138	5.91
1906-1910	14.61	1.10	0.46	39.5	2.46	117	4.40
1911	14.59	1.06	0.41	43.7		130	3,81
1912	13.29	1 02	0.35	32.4	1.82	95	2.81

Many of the lines of enquiry utilized by Delépine are not available in this Province and any deductions that may be made must necessarily be subject to such For example, no data have limitations. been published so far as the writer is aware, upon either anatomical, postmortem, or clinical results or upon the types of bacilli producing tuberculous lesions. This restricts the field of enquiry to the death statistics as published by the Provincial Registrar, and here again it is unfortunate that a classification of the various forms of tuberculosis has only been made since 1908.

The age distribution of the various forms of tuberculosis is one of the most interesting and significant as is shown by the following diagram which gives the ratio of the deaths from pulmonary tuberculosis to other forms of tuberculosis (phthisis being taken as unity) for quinquennial age periods.

Objection might possibly be taken to this comparison on account of the difference in the periods covered by the two sets of statistics. It is, however, impossible to obtain the rates for Ontario for the period of 1891-1900, as the various forms of tuberculosis were then all grouped under one heading and the returns for England and Wales for 1913 are not available. In Manchester, during 1913. Delépine's figures would give a ratio of

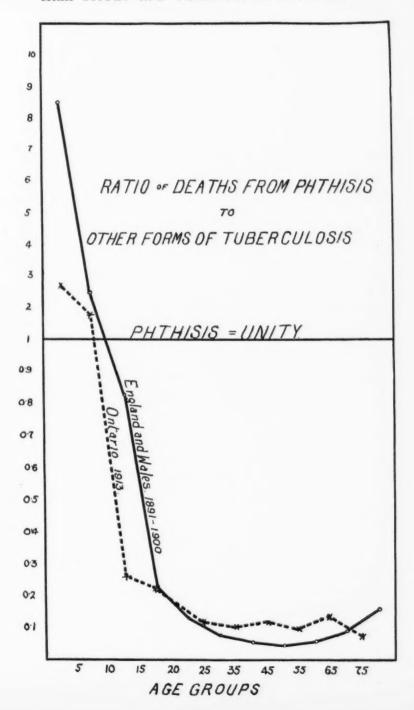
6.0 for the age group 0—5 years, so that even if this ratio for this group were somewhat reduced there would still remain a marked difference between the Ontario and English ratios for children under 5 years of age.

In England and Wales, it is significant, as Delépine points out, that the yearly mortality from all forms of tuberculosis amongst children under 5 years of age was at the rate of 3,930 per million, whereas the mortality rate from tuberculosis at all ages was only 2,010 per million: thus indicating factors peculiar to childhood. In Ontario, on the other hand, the conditions are reversed, the mortality rate from tuberculosis of all forms being smaller amongst children under 5 years of age than that of all ages; the comparative figures are 1,120 per million for all ages, and 700 per million for the age group 0-5 years.

The comparison of these figures is very striking, and it is well seen in the following table:

		Rate from	all Forms of Million.
	All Ages		Percentage Difference
England and	0.010		
Wales	2,010	3,930	+95.5
Ontario	1,120	700	-37.5

These results would appear to indicate that in Ontario there is an absence of fac-



tors which contribute especially to excessive mortality from tuberculosis amongst

children under 5 years of age.

The difference in the ratios of phthisis to other forms of tuberculosis between the various age groups for Ontario is striking but in the absence of evidence as to the type of organism and the portal of entry it will be advisable to await further information before attributing this difference to food supplies.

If the milk supply of the Province contributed in any material degree to tuberculous diseases, an improvement in the mortality rate amongst children might be expected during the last few years, for during this period there has undoubtedly been an improvement in the milk supply of the Province, due to better regulations for the sale of milk, increased veterinary inspection of producers and to the efficient pasteurization of an increasing percentage of the milk consumed. A smaller amount of tuberculous milk is now produced and the infectivity of the supply as a whole has been reduced by pasteurization.

The following table (No. 4) gives the mortality rates for Ontario in a form similar to those previously given for England and Wales and for Manchester.

The rate of improvement is shown in tables 5 and 6. In No. 5 the ratios of the

TABLE NO. 4.

MORTALITY RATES-ONTARIO

YEAR						DEATH RATE PER 1000 BIRTHS OF CHILD. UNDER 1 YR. OF AGE			
ILAN	All Causes	Phthisis	Other Forms of Tuber- culosis	All Gauses	Phthisis	Other Forms of Tuber- culosis	All Causes	Phthisis	Other Forms o Tuber- culosis
1908	14.6	0.95	0.17	45.3	0.28	0.42	154	.52	.70
1909	14.6	0.91	0.15	44.7	0.13	0.39	161	.20	.67
1910	14.9	0.90	0.12	46.0	0.18	0.30	156	. 25	.40
1911	13.6	0.81	0.12	40.8	0.19	0.32	155	.44	.67
1912	12.4	0.75	0.13	30.7	0.14	0.33	154	. 26	.65
1913	12.7	0.73	0.13	35.4	0.14	0.37	159	.19	.64

^{*}Stillbirths included.

TABLE NO. 5.
Rate of Improvement in Mortality Rates Compared With 1908. Ontario.

	Total Population			Children Under Five Years of Age			Children Under One Year per 1,000 Births		
Year	All Causes	Phthi- sis	Other Forms of Tubercul- osis	All Causes	Phthi-	Other Forms of Tubercul- osis	All Causes	Phthi- sis	Other Forms of Tubercul osis
1908	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1909	1.00	0.96	0.88	0.99	0.46	0.93	1.04	0.38	0.96
1910	1.02	0.95	0.71	1.01	0.64	0.72	1.01	0.48	0.57
1911	0.93	0.85	0.71	0.90	0.68	0.76	1.00	0.85	0.96
1912	0.85	0.79	0.76	0.68	0.50	0.79	1.00	0.50	0.93
1913	0.87	0.77	0.76	0.78	0.50	0.88	1.03	0.37	0.91

various rates to those of 1908 are shown and No. 6 gives the ratio of phthisis to other forms of tuberculosis.

These tables show that there has been no reduction in non-pulmonary forms of tuberculosis in Ontario during the last five years beyond what may be attributed to a general improvement in sanitary conditions as indicated by the mortality rate due to all causes. The rate of improvement for children under one year of age

matic examinations have been made, with the exception of those made by the writer during the past twelve months. The number of results obtained up to date is too small to warrant publication, but it might be said that they indicate that only a minute percentage of samples of mixed milk are infected sufficiently to give positive results by the innoculation method. Microscopical examination of centrifuged deposits has invariably given negative re-

 ${\bf TABLE\ NO.\ 6.}$ Ratio of Phthisis Rates to Other Forms of Tuberculosis. Phthisis = Unity.

YEAR	TOTAL POPULATION	CHILDREN UNDER 5 YRS.	CHILDREN UNDER 1 YR.
1908	0.18	1,50	1.34
1909	0.16	3.00	3.35
1910	0.13	1.67	1.60
1911	0.15	1.68	1.52
1912	0.17	2.36	2.50
1913	0.18	2.64	3.36

shows a slight margin in favor of the other forms of tuberculosis as compared with all causes, but this is offset by a slight loss in the children under 5 years of age (Vide Table 5). These groups in this table would also appear to indicate a relapse since 1910, but this is possibly due to an improvement in the manner of filling in death certificates. The phthisis rates have shown a very marked improvement in excess of the improvement in rates from all causes and must be regarded as eminently satisfactory. general increase from 1908 to 1913 in the ratios in Table 6, in the groups under 5 years of age is due to this definite improvement in pulmonary cases and not to an increase of non-pulmonary types.

The mortality returns show that the improvement in the quality of the milk supply has not been followed by a reduction in non-pulmonary tuberculosis, and so point to a lack of etiological relation between them. It is regrettable that very few of the milk supplies of the Province have been examined for B. Tuberculosis. So far as the author is aware no syste-

sults so that the infectivity of the supply must be regarded as very small.

Although both the a priori consideration of the milk supply and the a posteriori consideration of the mortality returns indicate the lack of causal relation between the milk supply and tuberculosis in the Province of Ontario, it would be advisable to suspend final judgment on this point until more evidence of all descriptions is available.

In some parts of the Province movements have been organized for radical alterations in the milk supply; these are being conducted purely in the interests of public health, but they are unfortunately based upon data which have been obtained in other countries, and which may or may not be applicable to conditions in Ontario. Whilst improvements in the direction of better inspection of producers and dairymen should meet with general approval, the premises of the arguments for compulsory tuberculin testing should be carefully examined before adopting a regulation of such economic magnitude.

SOME OF THE TROUBLES OF A RURAL MEDICAL OFFICER OF HEALTH AND THEIR REMEDY

By MARTIN POWERS, B.A., M.D.

Read at the Annual Meeting of the Ontario Health Officers' Association, Peterboro, May 26, 1915.

E, Medical Officers of Health, in our duties in the prevention or elimination of communicable disease are brought into contact with either urban or rural communities. The former I call the urban, the latter the rural officer, and really and truly the path of the former as compared with the latter is strewn with roses, and this I will try to briefly elucidate or explain.

Up to a certain point we, both urban and rural, are on the same level, in that we all have had the advantages of the same preliminary medical education; our positions are permanent and our salaries reasonable—by law, and thence our paths diverge. For instance, the urban has special officers detailed to do his placarding and disinfecting for him, whilst the rural must usually do this work himself.

The urban has milk inspection, a properly protected milk supply, and modified milk depots in the torrid summer months; the rural no milk inspection, where each one's dairy is in his own or his neighbor's back yard. The urban has adequate and up-to-date sewerage systems, the rural the ordinary outdoor toilet or the antiquated cesspool where each owner is as apt as not to pass the overflow on to his neighbor's lot, or the public thoroughfare, whichever proves the handier.

The urban has a pure water system, or at least a protected supply, whilst the rural has the ordinary well, or if he be lucky enough to have a water system, his source of supply, otherwise pure, is usually polluted or contaminated by sewerage from higher up the stream. The urban has his isolation hospitals with their staff of trained nurses, whilst the rural has no hospitals at all and rarely sees a trained nurse except in his private practice.

In short, the urban officer who is on the alert all the time is at the head of a well-trained army, where every avenue of infection or contagion is adequately proteeted against the advent of disease, or if perchance disease should enter he has the proper means ready and at his instant disposal to prevent its spread and properly cope with it. Whereas the rural officer is the whole army himself, is not, and is not called upon to be on the "qui vive" all the time, in truth his work begins only when an epidemic threatens, and then he has to hastily improvise his defences; in fact, his is the work in the trenches, not spectacular, rather strenu-ous, but gives surprisingly good results sooner or later, especially as he has as his allies fresh air and sunlight, Nature's own protection against disease. I've stated this much to prove, or rather show, to you that since the means at our disposal. i.e., the tools we are to work with, are so widely different, it must necessarily follow that the solution or solutions of the individual problem must be also entirely different, and the remedy I suggest for this is that at this, our annual conference. a special section or session be set aside for the rural officers to discuss problems whose solution may concern themselves and themselves alone with the one proviso that sufficient space of time may be found so as not to seriously interfere with the general scope of this meeting or assem-

This brings me to the consideration of our actual troubles, and the first and foremost may and not unrarely does come from the attending physician upon whose active assistance and not his passive resistance we must confidently and mainly rely if we wish to have any success in our work, especially in trying to cut short an epidemic. We have his active assistance when he reports promptly and definitely that he has such and such a communicable disease under his care. In fact, he oftentimes helps us very much by actually quarantining the case before our arrival. On the other hand we have his passive resistance when he may not report at all, or if he should he does so tardily, almost reluctantly, saying that he has such and such a case under his care, that he has slight suspicions that it may or may not be contagious, perhaps diphtheria, probably tonsilitis, scarlatina, hybrid measles, typhoid, a branch of fever, smallpox, chickenpox, or pustular eczema, and so on, although in his own heart or soul he knows or rather should know as well as we that the case is actually diphtheria, scarlatina, typhoid or smallpox, as the ease may be. He who acts thus knows full well the reluctance of the average family to be quarantined, which they unfortunately very wrongly consider a disgrace, and relieves himself of all personal responsibility or blame in the matter by leaving the onus of actual and definite diagnosis to the Medical Officer, who then gets all the blame with its attendant troubles.

Of course, in this category I do not include cases whose diagnosis may be somewhat obscure or uncertain, but I am aiming at the physician who shows such a lack of sympathy with us and our work that he finds it ever convenient to be consistently uncertain in his diagnosis when it comes to a question of communicable disease. For such a state of affairs I have no remedy; we must grin and bear it and things will right themselves in the end.

But there is more than this at which we must grin and also bear. I here refer to the highly munificent salaries some of us receive as Medical Officers. A brief history of how I came to receive \$10.00 per annum and how I've had it recently increased to \$100.00, may prove not uninteresting reading, and what is more, may enlighten you on some of my troubles and how I managed to surmount them.

I've practised fifteen years in the same town of Rockland, and eleven years of this I've been Medical Officer, and during this time I've been appointed thrice and dismissed twice, each time following an epidemic of smallpox, when quite naturally extra money had to be spent in suppressing it, and mark this well, I held my position under the old regime for six consecutive years without any trouble of any kind until smallpox came along in 1911. The tax rate went up, and I, along with the whole local Board of Health, received our conge, so that in the final analysis it seems to me that our troubles have their origin in it being a matter of dollars and cents to the community and under the old regime they sought efficiency not so much as economy in dealing with health matters, which under the new regime has been happily changed, since our positions were made permanent, by the Provincial Board seeing to it that we are efficient, whilst the local council still attends to the economy in many localities by giving unreasonable salaries to their Medical Officers.

What persecution I had to endure during 1911 made my heart sore and many's the day I thought the proverbial darkened cloud had lost its silver lining. First and foremost the general public was raised up against me by a few of their selfappointed leaders who claimed it was not smallpox at all. I got over this by bringing in a specialist who showed them that my diagnosis was correct. They then objected that the disease was so mild and only in children that no precautions should be taken. My answer was that from the mildest case the most virulent might develop, and that adults were not immune. Time vindicated me, for later on, adults were attacked and some of these were of the virulent confluent type. so hideous to look upon in the pustular stage. And these individuals are now, sad to say, the living relics and constant reminders of fools rushing in where Angels fear to tread. Quarantining those exposed was another target for my opponents, and try how I might I could not seem able to drill it into their heads that a certain number of days were required after exposure for the disease to develop, but when smallpox appeared amongst the quarantined they let up in their fusilade.

Vaccination was tabooed, and they would have none of it, and in this were encouraged by the advices so often given in some newspapers whose editors, otherwise highly intelligent, are constantly on

the alert with an energy worthy of a better cause to rail against any and all sorts of vaccination, and all I have to say to them in this connection is to study more deeply and thoroughly, for as Pope says. "A little learning is a dangerous thing," and will add may the Lord forgive them, for they know not what harm they do, and they would have it brought home to them more succinctly and understand it much better if they could see as I've seen in a smallpox epidemic how the disease spreads like wild fire amongst the household unvaccinated, leaving the vaccinated unscathed.

But what capped the climax of my troubles in 1911 was the establishment by our Local Board of an isolation hospital which I did then and do still consider an ideal system in cutting short an epidemic, but the public in general considered it an absolutely foolish and unnecessary expense and did not hesitate to tell us so in no unmeasured terms. Public opinion, as I've shown was strong against us, and our Council to be popular, were also against us and tried by devious means to circumvent us, but all to no avail, as they found we were within the law in every move we made. Their principal and final onslaught was their very determined effort to remove from us our money supply, in this also they failed. They then kept quiet, but only for a time. One very easy solution of the question from their standpoint would have been my summary removal from office, which the then law could not have prevented, but luckily for me they never thought of it.

With such opposition to the Local Health authorities from the general public and Municipal Council, it was not very surprising to find that many of the infected families thought they were doing what was just and proper in concealing their cases, and in this they were often abetted even by their neighbors till some timorous soul more fearful of infection than the rest would give the alarum, but usually rather late to prevent its spread.

But more of this anon.

Finally, thanks to the brilliant efforts of the then Local Board of Health, without whose courageous assistance I would have been practically helpless, our epidemic came to a speedy and successful termination.

For this we received no thanks, only abuse and opprobrium were heaped upon us by those who should have known better for our so-called heinous crime of so foolishly spending the people's money, with the very natural result that at the next election when smallpox was the issue, a Council was chosen whose majority saw to it that we were speedily relieved of our positions, and as far as they were concerned we went down to oblivion-"unwept, unhonored and unsung." However, I was not mortally wounded; I was only struck below the belt; my opponents had won on a foul, and I'm alive and well to-day to tell the tale.

As my successor they chose a very estimable and clever practitioner who died within a few months. Two other attempts were made to fill the position, both proved abortive. The office was again vacant, so, our Council now knowing that the position would be permanent, decided after mature consideration to reappoint me, even in the face of the most strenuous opposition. My reappointment at this juncture I considered a vindication of my conduct as Medical Officer in my previous years, and ever look back upon it as one of the brightest and happiest moments of my medical career. But now I give you all a gentle warning who consider yourselves secure and immune from trouble as Medical Officers, that you will find as Councils change that though your friends in the natural course of events must find time to slumber, still your enemies never seem to do the Rip Van Winkle stunt, but are wide awake and on the job all the time, for in my case they got back at me by naming as a reasonable salary \$10.00 per annum, and, notwithstanding my most earnest endeavors to show them the error of their ways, they repeated the dose in 1914. The only glimmer of satisfaction that I could get from them during all this time was that if I were not satisfied I could resign and that they had another medical man ready to take the position at even a lower salary. This latter statement was all too true, so my answer was that I was not in the resigning business. but intended to do my work as faithfully and efficiently in the future as I had done in the past, no matter what the salary, and I kept my word.

During these two years my work consisted mainly in dealing with sporadic cases of smallpox, which has been practically endemic in our locality since our epidemic of 1911, due mostly to the concealment of cases by infected families in our population so largely unprotected through lack of vaccination. This was brought home to us most vividly early in the present year when I received a complaint from a most authoritative source that the town councillor, my most inveterate opponent, who had been the prime mover in fixing my salary at \$10.00 per year, was concealing smallpox. He was running a grocery store in connection with his residence, so I knew it meant an epidemic if my information proved correct. And true it was, for though he had at first denied it, he finally acknowledged when the Local Board brought pressure to bear on him, that he had had chickenpox in his household, and that the families of his son and son-in-law (the latter a butcher) had it as well, and our epidemic was on gloriously, for all this chickenpox was true smallpox. Energetic precautions were at once instituted, but rather late, as some of the customers of this grocery store and butcher shop were already infected, and through them their relations. The infection of over a dozen families, comprising 50 cases, with a total cost of a thousand dollars, was the sum total due to the concealment of this one case of so-called chickenpox. This councillor had mighty little respect for the Local Board till he was so forcibly brought to time, and his son had less, for he broke quarantine. For this our remedy was his speedy arrest and a heavy fine, which worked like a charm, for we found that Public Opinion from that moment turned in our favor, and ever since then we have had practically no trouble.

Just at this juneture our Municipal Council assembled to decide my salary for the present year. A motion was made that it be increased to \$100. Objection was at once made by my other consistent opponent, who, along with my varioloid friend, has made my life as Medical Officer so miserable during the last few years. His objection was that I was making too much fuss about this disease which he thought was not smallpox at all, while even if it were smallpox it was not

contagious because the people did not die from it. However, even he relented somewhat when he saw that the public, through their Council wanted to treat me reasonably, but made a last and final effort to still keep me under by making an amendment to give me \$50, which was lost, and the motion making my salary \$100 carried. This is by no means an adequate salary, but I accept it as an omen of good-will on the part of our Council who this year are really trying to do what is right by me. And I arrived at this happy termination of my strenuous troubles of the last few years by bearing no spite or malice to even the bitterest of my opponents and by patiently waiting for better days. In the meantime, I attended faithfully and efficiently to all my work as I understood it, and as so ably directed by our ever ready and always courteous Chief Officer, Dr. McCullough, and his very able and painstaking assistant in our district, Dr. Moloney, to both of whom I tender my most sincere thanks for so much of my success during this most strenuous period of my career as Medical Officer.

But a reasonable salary and just treatment one year do not necessarily mean the same the year following, for Councils change, and the newly-chosen members who, like some of the old, may be overzealous at lowering expense, which is at all times a very popular move, are just as apt as not to commence their economic campaign by curtailing the emoluments of the luckless Medical Officer. This is no idle dream, but actually does happen, and one remedy for this would be for those in authority to decide upon what constitutes a fair and reasonable minimum salary or otherwise arrange it in any manner that their mature judgment would consider proper so that we officers could not impose upon our Councils or they upon us, which happens in more than isolated instances. And now, in conclusion, if we take a broader view of the source of all our troubles we would find that it really and actually consists in the false impression the general public have of preventitive medicine in general, and especially of its exponents, the Medical Officers, in particular, who are looked upon in many instances as an infernal bother and unnecessary bill of expense to be got rid of at all hazards. Whereas, if they would only look upon us in the proper light, they would soon see that we are actually working not only against our own best interests from a financial standpoint, but rather in favor of the whole community, for if we could succeed as we wish to do in keeping all the people well there would be no doctors' bills to pay and enforced idleness through illness would vanish, thus adding to the wealth and prosperity of the country at large. We, in short, are the pioneers who are blazing the trail for the physician of the future whose duty 'twill be to keep the people well, not to cure them when they are ill, and, I will add, all pioneers must suffer.

This forming and moulding of Public Opinion is, to my mind, the best solution, and I know of no better means of attaining this happy end than by constant and progressive study to so improve ourselves that even the most obtuse will be forced to admire us in our continued efforts for the public weal. Then with the

public confidence will come their active co-operation, and that is what is most needed to make our work of practical and lasting value.

As a means to this end we should all aim at becoming specialists in our chosen line by having ambition enough to at least aspire to being the proud possessor of the title of Diploma of Public Health. The incentive to those amongst you who have the time and the wherewithal to take such a course may yet come from the County Councils who, singly or collectively, may yet see their way clear and will, I think find it money well expended to have and to hold in their midst the holder of such a title whose duty would be to give constant advice and timely assistance to the local officers, until the time when the Provincial Legislature will in its wisdom find it convenient to so increase its staff of District Health Officers as to have the number sufficient to cover the whole Province, which will be the Iogical and most satisfactory ending to all our troubles.



THE PLAYGROUND ATTENDANCE AND THE PLAYGROUND DIRECTOR

WHAT A SUPERVISED PLAYGROUND CAN DO FOR ITS NEIGHBORHOOD—HOW TO FIND OUT WHAT ITS ACTUAL SERVICE IS

By HENRY S. CURTIS, Ph.D.

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O those who have not thought much about it, it appears that the play movement has grown out of the increasing congestion of our cities, and that the one thing needful is to restore to the children a place where they can play. However, experience and even the simplest observation of actual conditions disprove this view. Vacant lots in the city are seldom much used by the children. anyone who is interested will keep a record of the attendance on any good-sized va-cant plot, I think he will find that less than one per cent. of the children in the neighborhood are there on an average. It will be used by the older boys to play baseball in the spring and football in the fall, but it will not be used much by the little children, and scarcely at all by the girls.

It will be found also, as a rule, that the presence of vacant squares in the neighborhood of playgrounds makes very little difference in the attendance there. At the time I was a general director of playgrounds in New York City we had a playground at 102nd street which lay next to a vacant plot of equal size. There would usually be two hundred or three hundred children on the playground. There would seldom be more than four or five on the vacant plot. The second year that I was supervisor in Washington we purchased a field that lay on the extreme outer edge of the city. There were five hundred acres of accessible vacant land lying right around it. There would usually be two hundred or three hundred children on the playground each afternoon. There would seldom be any children in sight on the vacant land. The vacant lot in the city does not have the appeal of the country meadow, with its brooks and trees and flowers. The

playground that is a mere vacant space fails, because the children do not come.

There are many also who believe that what the children want is to be left to play by themselves, and one not infrequently hears the expression "unbossed play" used with approval. Certainly play ought not to be bossed, but play that is organized is always much more attractive to children than play that is unorganized. The great difficulty in the beginning at all playgrounds is to get the children to earry on the games by themselves. The director will start a game and the children will fall in and play with her. It is necessary to have a number of games going at once in order to use the space economically in a congested playground; but as soon as the director falls out of one game to organize another, the children are apt to leave the first game and join the second.

During the first year that the playgrounds were maintained in Harrisburg. Pa., they were kept open with no one in charge. The authorities finally concluded it was not a success. They said, "We will get the best young college athlete we can find and send him around to organize the games on the different grounds." It worked beautifully. He went to the first ground and taught the children several games. Then he said to them, "Now, children, you stay here. I have to go to the next play-ground." He went on to the next playground, and the children went with him, and here the same process was repeated, until he had nearly all the children of the city behind him and became a regular Pied Piper; and then they concluded that this was not a success, and put a director in each playground, as they ought to have done in the first place.

We had the same experience in a school playground in Washington. The playground was about 80 feet square, and contained, perhaps, \$50 worth of apparatus. In the beginning of the summer we put a very capable kindergartner in charge, and we had an attendance of four hundred children in the yard every day. kindergartner went off for her vacation about the middle of the summer. We put a substitute in her place, and we had two hundred children in the same yard. substitute went away a short time before the close of the vacation. We kept it open in charge of the janitor, and we had an attendance of fifteen to twenty-five children. The difference between fifteen and four hundred was purely a difference in organization. The first teacher was very attractive personally, and much loved by the children. She knew how to keep a whole series of things going in the yard at the same time. She gave the children what they wanted and made it interesting to them. I believe the director is nearly always the largest single element in securing the attendance of the children. From season to season in the same playground the attendance serves as a good record of her success.

In the public school attendance is compulsory, and it does not, therefore, express the opinions of the children as to its value. In the playgrounds the attendance is voluntary, and it serves, consequently, as an excellent index to the feeling of the children in regard to it. If it does not give them what they want, if it does not appeal to them as worth while, they will not come; and, consequently, the first requirement that is put upon the playground is that it must secure the attendance of the children.

Of course, we must not hold the director responsible for the sins of the city fathers. Some playgrounds have been located in almost impossible positions. It does not follow that because there are many people in a certain section of the city there are also many children. Business sections and apartment house neighborhoods are apt to have very few. The playground cannot produce the children. If there are not enough in the neighborhood, the attendance at the playground must necessarily be small.

The selection of playground sites should be preceded by a child census, so that they may be located where the children are. The registration of the schools of the neighborhood will always serve as a fair index. However, the question is not so simple as it looks, as there are apt to be sections of the city that do not associate with each other. The children will not come across much from Irish sections into Italian or Jewish sections, as a rule. The children of a well-to-do-section will not come into sections inhabited by working people. There are often feuds of long standing between certain districts of the city and others. All of these have to be taken into consideration in laying out playgrounds, or the attendance will show it. It may be best in the end to place a playground where it will draw from different nationalities, so as to prevent the formation of an exclusive foreign colony; but the attendance will not be nearly as good at first as it would be if it were surrounded by a homogeneous people of the same race.

The equipment is, of course, an element in securing the attendance of the children on the playground, though its importance is usually much exaggerated. With the exception of the swimming pool, I doubt if the best kind of equipment will ever secure attendance for long. However, it does serve to bring the children to the playground in the first place, though their continued attendance will depend mostly on the director and the organization of the

activities.

One of the very largest elements in securing the attendance in the summer time is shade. The children do not wish to play out in the sun in the hot weather, and they will not do it. If they cannot get into the shade on the playground when the thermometer nears the hundred mark they will seek some place where they can.

In general, it will be found that the attendance is not as large on the playgrounds in the forenoon as it is in the afternoon—in my experience not more than half as much—and that it is also much less in the early afternoon than it is in the late afternoon. In Washington we always kept our playgrounds open until dark in the summer, and there were always two or three times as many children between five o'clock and dark as there were at any other time during the day. Where the playgrounds are lighted at night, they usually secure

the attendance of the working boys and girls in the evening. The evening is the most comfortable time for athletics and all sorts of vigorous games in summer, and the playgrounds should be kept open when-

ever possible.

There is no definite single answer to this question, of course. The big children will come farther than the little children, the boys will come farther than the girls. Children will come farther in an open section of the city than they will where it is much congested with traffic and crowds. The playground is a loadstone to the child: the other elements taken into consideration, the distance that the children come may be taken as a pretty accurate measure of its attractiveness, and serves as one standard for marking its efficiency.

In the study of the registration of the children on the lower East Side which was made by the Park and Playground Association of New York City, it was found that 90 per cent, of all the children came from within one block. In the playgrounds farther uptown where the congestion was less, it was found that 60 per cent. of the children still came from within one block. In the study of the children attending the kindergarten playground of New York it was found that practically none of them came more than a five-minute walk. In the study of the attendance in Chicago, where there were all sorts of attractions in the way of out-door swimming pools and wading pools, etc., and the city was comparatively open, it was found that 79 per cent. of all the children came from within one-quarter of a mile, and that 89 and a fraction per cent. came from within onehalf mile. Children will come occasionally to a playground as much as two miles away. If it is made very attractive, they may even come frequently; but they will not come every day or probably more than once or twice a week. Boys will go a long distance to a swimming place in summer or a skating place in winter, but the range of the other features is much less.

The playground is essentially a neighborhood affair; it ought to be. Parents do not wish their children to go away into another section of the city to attend a playground. They are always likely to be set upon and maltreated by gangs from the other section. It is not safe, morally, for adolescent or

even younger girls to attend frequently a playground at a considerable distance from their homes where they will go and come through a section of which they or their parents know little. The small children cannot safely go far by themselves for fear of getting lost. It would appear from this that the playground must be in the neighborhood where the children live. It should not be more than half a mile away, and it will be much better if it can be within a

quarter of a mile.

Some are always much surprised and disappointed to learn that the children do not stay at the playground all the time after it is opened, but there is not room enough in any of our playgrounds to hold more than a tenth of the children if this actually took place. If any playground secures an average attendance of one-tenth of the children who are living within the half-mile radius it is doing much better than most playgrounds are doing now. The boy who is coming in to play basketball for an hour three times a week may be getting all the exercise he needs and ideals of sportsmanship which will remake all his outside play and most of his life, and yet, so far as appearances go, he may not be at the playground at all. In this way, with a day of 8 hours for 6 days a week and an average attendance of 100 children each hour, it would be possible for 1,600 children to have an abundance of good physical exereise and yet have the playground seem almost deserted all the time.

This fact of the comparatively brief stay of most children on the playground should give a quietus to the argument that organized play takes away the initiative of the Organization gives the child the materials with which he can make hundreds of new combinations in his outside play. The child will always play outside the playgrounds as much or more than he does inside it from the very nature of the situation and from the impossibility of getting on the playgrounds for play if the children should actually make up their minds to have all their play there.

The first year the playgrounds were open in New York we sent out a questionnaire to all the directors asking them their opinion as to how long the children stayed on the playgrounds. They nearly all said that the children came in the morning and staved all day. The second summer I stationed men with tally registers at a number of playgrounds and kept the record for a week. On one playground where the maximum attendance at one time was 800, 4,800 children came in the afternoon. In all of the places where we kept record it was more than three, and in some cases it was six or seven, times the maximum.

Most directors think this is not true of their playground, but it is more true than they realize. There are always certain children who make the playground their home, who take part in almost everything. and whom the director comes to know well. He is apt to estimate the attendance by these children and to overlook the shifting population who constitute the rank and file. There are many children who come to the playground only for special periods and activities. They come for the story period, or the industrial period, or the folk-dancing, or the athletics, or basketball, or something else, and go away as soon as this period is over. Probably they do not stay over an hour, but it may be quite long enough to get what they come for and to receive a valuable training.

Children will probably always play in the street as much or more than they do in the playground, at least until we have far better and more adequate playgrounds with better trained workers than we have at present. One of the greatest services that the playground has rendered to its community has been in giving incentive and motives and ideals to the outside play as well as the inside play. The playground that does not reform the street play of the children is doing not more than half of its What it must really do to serve the actual need is to create such an enthusiasm for good games and for proper methods of play that these will go with the child

through life.

The child needs play outside the play-ground as well as inside it—play that is unsupervised as well as play that is supervised. But in order for him to get the training that the playground is giving, he must play on one of its regular teams and compete in some of its athletics. Several years ago I wrote to the street commissioners of all of our largest cities, asking them what provision for or recognition of the street play was made in their respective

cities. I had a considerable number of replies, all of which indicated that nothing was being done. One commissioner replied: "Sir: We have not considered putting our streets to any such use." This, too, in spite of the fact that his city was making no other provision for the play of the children, and the function of many of the streets as playgrounds was far more important than their function as streets. The asphalted streets of residence sections will always be largely used as playgrounds, and it is not well for the street commissioners to forget this fact.

The playground is the most democratic place on earth, yet it is not absolutely democratic. When I took visitors around through the East Side to inspect the playgrounds, they would often say: "This is all very fine, but where are the poor children? We want to see the playground where the poor children come. These chil dren are all well dressed. They do not look like the children on the streets." was perfectly true; they did not. Nevertheless, they were much the same children. A playground has to set some standard of cleanliness and personal appearance. We used to have wash basins and towels at each playground and scrub the dirty children or send them home to have their mothers do it. Consequently, the children on the playground were always reasonably clean and neat in appearance. They nearly all wore shoes. They seemed like a different genus from the street Arab, though often it was only a seeming.

It is necessary to have some standard in these things, for the reason that if the children feel that they are privileged to roll in the gutter each morning before they come in it will give the playground an evil appearance and reputation. The parents who come and see it full of dirty and ill-looking children decide it is not the place for their children. It is necessary to set some standard also for the sake of discipline. The child who is dirty and ragged tends to live down to his appearance. The child who is well dressed and clean and feels himself a "little gentleman" tends to act the part. The result of all this is, that the standard that is set by the playground always tends to exclude the extremes. If the children come in as ragged and dirty as they choose, the street Arabs will come, and the children from the better-to-do families will stay away. If the standard is set too high, the poorer grade of children will be excluded—not, perhaps, because they could not come wholesome and clean, but because it is too much effort for them or their mothers.

There are a considerable number of playgrounds where the children are all registered. In some, the children are given special buttons to indicate that they belong to this particular playground. There are several important advantages in knowing the names and addresses of the children, but the securing them is apt to consume a good deal of time and cause some annoyance. If a child is registered, he feels responsible If his name and address are known, he realizes that it will not be safe for him to run off with the baseball or to cause undue an-The registration also aids the teacher greatly in learning the names of the children, and this is an important advantage. Where a teacher has the playground the year round, it should be possible to get a reliable record of the children who attend. When it is only a summer playground, this is very difficult.

Still, a certain amount of registration is necessary. The teacher must know the name and address of every child who is playing on a regular team or who is entered for any contest, in order to know that the boy or girl is eligible to the contest, and also that the child may be sent for if he does not appear at the time the game or contest is supposed to take place. In permanent playgrounds it ought to be possible, sooner or later, to compare the playground attendance with the attendance at the schools to find out just what percentage of the children are coming and who are staying away. This would reveal at once the actual weaknesses.

Are the big children coming and the little children staying away? Then something more needs to be done for the little children. Are the boys coming and the girls staying away? Then very likely the director is not using the best methods with the girls. Are the Irish coming and the Jews and Italians staying away? Then this needs investigation. Are the children coming from one side of the playground and staving away from the other? Then sectional or race feuds may be suspected. If the children do not wish to go, then there is something wrong with the playground, the director, or the children. If they dare not go, then the street gangs of the neighborhood will bear investigation. If their parents will not allow them to go on account of lessons or home industries, then this should be looked into.



THE REALM OF THE HAPSBURGS

By FLORENCE WITHROW

N considering the great Austro-Hungarian Empire it is interesting to note the derivation of the names, the former Esterreich meaning the East March and the latter Ungarn, the land of the Huns. This hetergeneous Empire is composed of 22 states and contains the greatest variety of races in the world today. They are diverse in origin and character, with differing languages, religion and customs and with certain independent systems of government which are insecurely welded together by Austrian Imperial control. In the face of present conditions, that some will separate seems only a matter of time, for with such ethnographic differences unity and harmony have been impossible.

Little is known of the inhabitants before the Christian era, save that the Romans found chiefly Celtic tribes, the most powerful of which were the Boii (Celtic for terrible ones), hence the name Bohemia. Gradually Rome's outposts of Empire, extending east and north, the country of these various tribes became Roman provinces, won chiefly by Marius, Julius Caesar, Drusus and Trajan, thus at the end of the first century Roman civilization was established and the nucleus of cities founded, such as Salsburg, Augsburg, and Vienna. Roman dominion prevailed until the end of the third century, when hordes of Goths from around the Baltic overran the northern confines and penetrated below the Alps into Italy. They were the first barbarians to invade the Roman Empire. Later came the Heruli, Huns and Vandals. The Heruli were Teutonic and the Vandals Scandinavians, akin to the Goths, but the Huns were Asiatic and were feared even by the Goths, whom they drove out of Dacia and Pannonia, where they established themselves in what is now Hungary. Attila, their leader, set forth from his camp called Buda (Budapesth) to scourge Europe, but died the next year, 452. At this time the Gepidae and Suevi, Germanic tribes from the Baltic, settled along the Danube, but a century later, 568, were driven south by the Avars from the steppes of Asia and the Slavs from Russia.

Of course these distant races were pagan, not having come under the Christianizing influence of Rome, but gradually the leaven of Christianity from Bavaria and Bohemia began to permeate the whole country, and missionaries became numerous, among them Rupert of Worms and Winfried of England (723), or Boniface as he was subsequently called.

The power of the Franks, a Celtic tribe in Gaul, having enormously increased, the Frankish kingdom under Chas. Martel. Pepin and Charlemagne won dominion over many of the heterogeneous states of Eastern Europe. The toughest fight was with the Avars and Huns, but Charlemagne crossed the Danube 795 and penetrated to their capital Buda, where he wrested from them much booty, which they themselves had stolen from Celtic tribes. The Avar power was completely crushed, and Charlemagne pressed further East, his ambition being to extend his domains to those of Byzantium, hence the old Greek proverb, "Have the Franks as friends but not as neighbors."

At Charlemange's death his vast dominion was divided among his sons, and the country now known as Austria and Hungary became separate from the Frankish realm. On account of the large Slav population Bohemia and Moravia were the first to rebel against their Germanic rulers, 869.

On the extinction of the Carlovingian dynasty, the Imperial power passed to the House of Saxony under Henry I. the Fowler, 918, whose first action was to quell the rebellious Slavs and Magyars. The former he compelled to pay tribute, and to the latter he paid tribute as a compromise on a nine years' armistice, at the expiration of which he was strong enough to crush them.

Otto the Great (successor 936-973) put an end during his time to the Slav and Hun incursions into German territory, and the birth of the Austrian state is said to date from this period, when the region adjacent to Hungary began to be called the Ottonishe mark or Ostarrechi (East mark), and was ruled by a Margraf appointed by the Germanic or Holy Roman Emperor.

Otto II.'s (955-983) reign was short, but he did a big work in subduing the hereditary princes of Bavaria and Bohemia and in making them pay tribute to the Empire. Meantime Otto III. (980-1002) improved conditions in the newly-acquired states, and in the year 1000 prevailed upon Pope Sylvester II. to appoint Stephen I. independent King of the Magyars. Stephen was the son of a native chief, who married Otto's sister and be-

came the first King of Hungary. From the Saxon Line the Imperial crown passed to the Franconian under Conrad II. (d. 1039). During the reign of this House there was constant dissention among the petty princedoms, dukedoms, etc., such as Bavaria, Bohemia, Swabia, Saxony, for although the Teutonic element predominated, Slavs. Croates and Magyars formed a motley and irreconcilable mass, who were opposed to being vassals of the German Empire. The chief event of Conrad's reign was his election to the duchy of Burgundy, a rich Frankish province, and its consequent addition, 1033, to the Empire over which its powerful dukes exerted great influence.

Conrad's son, Henry III., and grandson, Henry IV., had troubles enough with their vassal states, which did not wish to be fiefs and pay heavy feudal dues. Henry III. (1017-1056), however, was one of the ablest Emperors and held them in subjection. He also deposed three Popes, and created a German bishop spiritual head in their stead. His wife was a daughter of King Canute.

Henry IV. (1050-1106) found himself at special enmity with the Saxons, who called upon Pope Gregory VII. (Hildebrand) to settle the dispute. The story of the proud Emperor's humiliation before the powerful Pontiff by standing barefoot in the snow at Canossa is well known. He found himself deposed, and Rudolf of

Swabia elected Emperor; however, certain German princes rallied to his standard and he succeeded in transferring Swabia to a young Count, who built a castle on Mt. Staufen and became the founder of the Hohenstaufens.

Henry V. (1081-1125), although an unfilial son, carried on the war of investitures begun by his father, and gained from the intimidated Pope who followed Gregory VII. recognition of the Imperial right to grant ecclesiastical offices. In Henry V.'s reign the East Mark was elevated to a Duchy and Leopold the appointed margraf became Archduke. His brother was reigning duke of Bavaria, which for a period became united with Austria as the duchy was now called.

Archduke Henry II. was familiarly known as Jasomirgott, "so help me God," a rough and intractable fellow, but of pious protestations. Coarse invocations of the Deity are said to have been characteristic of some Hapsburgs as of certain Hohenzollerns. Vienna now sprang into prominence, and the old Roman fortress Vindebona was enlarged into the royal burg. St. Stephen's Church was also begun in 1180.

Henry was succeeded as Archduke by his son Leopold VI. (1182), who accompanied Frederick Barbarossa to Palestine on the third crusade. Barbarossa was drowned in Asia Minor and was buried in Antioch. His son, Emperor Henry VI., a cruel and hard man, took Richard of England prisoner and, with the ransom obtained, levied an army which deluged Italy.

Leopold VI. also died in the Holy Land and was sepulchred in the monastery of the Holy Cross, where shortly afterward his son Frederick I., who went "to secure the safety of his father's soul," was likewise interred.

Leopold VII. followed in the Austrian duchy 1195, and Frederick II. succeeded his father as Emperor. Leopold is known chiefly as the faithful friend of Frederick II., whose imperial career was strangely checkered, and who was repeatedly excommunicated by the Pope.

Leopold's son, Archduke Frederick II., named after the Emperor, also had a stormy history, his Austrian territory being frequently invaded by the Bohemians under King Wenceslaus I. Frederick dying without an heir and without a will, three claimants appeared for the duchy. The Emperor Frederick II. also died before the dispute was settled, so a legacy of trouble was bequeathed to Emperor Conrad IV., the last of the Hohenstaufens of Swabia.

By a strange coincidence the Imperial throne soon became vacant, and Pope Gregory threatened to appoint an Emperor unless the Electors would bestir themselves. Consequently they speedily elected Rudolph of Hapsburg, thinking he would be subservient to the temporal princes, but they soon found that he asserted his authority in no uncertain manner.

Rudolph was the son of Albrecht IV., Count of Hapsburg, whose ancestral castle was in Switzerland, on the river Aar. The Hapsburgs owned considerable lands in Swabia also, which were divided between two sons, one getting Aargau and Alsace and the Hapsburg name, the other found-

ing the Lauffenburg Line.

Rudolph (1218-1291)) passed his youth at the Court of the Emperor Frederick II., where he became noted for horsemanship and skill with the javelin. His first difficulties were with his uncles, who tried to wrest from him much of his territory, next with the avarieious Bishop of Strassburg, who claimed political as well as ecclesiastical rights. This made Rudolph a hero with the Strassburgers, through whom he gained tremendous influence in Alsace and the lower Rhine. The mountaineers of Switzerland also looked to him as their natural protector against robber knights, and proclaimed him "the invincible," which reason the satiric and defeated Bishop exclaimed, "Sit fast Lord God or this Hapsburg will occupy thy throne."

Such was the intrepid warrior, aged 55, whom the Electors chose as Emperor. He quickly acquired the Austrian provinces, which under the Leopolds had fallen a prey to Otakar, the powerful king of Bohemia and fixed his Imperial capital at Vienna. He humiliated Bohemia and Moravia, and in order to secure to his own family suzerain rights over these kingdoms, espoused his son and daughter to a daughter and son of Bohemia. In 1282 by diplomacy he won over the Electors at the

Diet of Augsburg and thereby had the Austrian provinces conferred on his sons as a joint inheritance. Thus the first Hapsburg Emperor was not slow at acquiring what he wanted, which acquisitive trait has not been lacking in the Austrian House. Furthermore he despatched his youngest son to England to marry the daughter of Edward III., but the youth was drowned in crossing the Rhine.

In imperial affairs this ruling Rudolph was just the monarch needed. "Living Law" he was termed, for he established Courts and settled disputes by arbitration. He cleaned things up generally, condemning to death 29 robber knights and destroying 70 robber castles in a single year, and he also wrested 20 fiefs which counts and dukes had surreptiously stolen. Moreover, he quelled the Tartars who invaded Hungary. Mommson says that he was fitted to rank with Alexander, Caesar, Frederick the Great and Napoleon. stature nearly seven feet and with a keen but merciful eye, well could the poet's couplet apply, "truest friend and noblest foe," for he won the respect of all. was as worthy a founder of a dynasty as was the grosser Kurfurst of the Hohenzollerns. Many anecdotes are told of his humor, generosity and mercy, which show him to have been a man of magnitude both of body and mind.

After a disputed election Albrecht I. (1248-1308) his son, became Elector (1298), but without the Pope's (Boniface VIII.) ratification. Albrecht went ahead with a high hand and invaded Bohemia, Hungary and Switzerland (1305-1309), all of which for the time being he subdued. Switzerland was then a collection of small sovereignties and baronial fiefs, over the less powerful of which he appointed Austrian governors, among whom was Gessler, who was shot by the traditional William

Tell

The beginning of Swiss independence and confederation dates from this time, when the Vierwaldstatte (four forest cantons, Schwitz, Uri, Untewald and Lucerne), united to withstand foreign oppression. Albrecht found he could not hold in subjection the spirited mountaineers, who rose in revolt and clove him in twain. For this murder 1,000 Swiss were executed under Austrian authority, at

which bloody spectacle Albrecht's cruel daughter, Queen of Hungary, was present.

Frederick I. of Hapsburg (son 1326) succeeded to the throne of Austria, but the Imperial crown went to Henry VII. of Luxemburg. During Frederick's terrorizing reign there was renewed trouble with Bayaria, Bohemia and the Tyrol, and as a result Austria had to renounce all pretentions to their vassalage.

Albrecht II. (1330) followed his brother and continued the struggle with Bohemia, its fighting king John having fallen at Creey.* But John's son, Charles of Moravia, held his own against Hapsburg aggression and even became Emperor by the Electors' vote.

Albrecht again sought to break Swiss independence, which, however, had grown too strong, Zurich and Bern having joined the Helvetic Confederacy; thus a disappointed man he retired to Vienna and died broken hearted, 1358.

His son, Rudolph IV., a lad of nineteen, succeeded. Although young he possessed Hapsburg love of titles and procured from the Imperial Diet the title Archduke for all his House. Next he acquired the Tyrol through marrying the widowed Queen. In Vienna he rebuilt the Cathedral of St. Stephen and founded the University. His educational career was suddenly stopped by early death at the age of 26.

Albrecht III. and Leopold II. (brothers) followed (1365), but soon quarreled, so divided their realm, Albrecht taking Austria proper and Leopold Alsace, Swabia, Styria and the Tyrol. The Emperor gladly assented, saying: "We have long labored to humble the Hapsburgs, but they now humble themselves." Still further humiliated was Leopold, who brought battle against the sturdy mountaineers of Switzerland, but through the bravery of Arnold Winkelried the Swiss gained a decisive victory, and the noble Winkelried immortal glory in the great battle of Sempach, 1386.

Albrecht III. having been more a man of peace and piety than his warring brother Leopold, his son Albrecht IV. (1395) was like him, hence the latter's reign was

uneventful, and in turn he was succeeded by his son Albrecht V. (1404). This youthful Hapsburg married the daughter Elizabeth of the Emperor Sigismund, who was also King of Hungary and Bohemia, and thereby gained another crown a few years later.

At this time the Hussite war broke out. John Huss, rector of the University of Prague had become imbued with the doctrines of Wyelif, for which he was excommunicated by the Archbishop of Bohemia. Riots followed, for the populace supported Huss, and he was given a safe conduct to Constance to answer 39 charges against him, but refusing to recant he was burned alive and his ashes were thrown into the Rhine, 1414.

During the religious wars which followed, Albrecht V. assisted the Emperor Sigismund, who duly rewarded him by proposing to Hungary and Bohemia that as his son-in-law he succeed as ruler of the joint Kingdoms. Accordingly Albrecht and Elizabeth were hailed as King and Queen (1437), this being the first time these countries voluntarily submitted to Austrian dominance.

More honors awaited Albrecht V., for the Electors at Frankfurt chose him as Imperial successor to Sigismund and ratified his Kingdom of Hungary, 1438. Thus after a lapse of 130 years the crown of the Holy Roman Empire came again to a Hapsburg Prince. He proved worthy of both high offices, and was heroic in his defence of Hungary against the Turks, in which peril he lost his life only a year later.

In both Austria and Bohemia, the truth of the saying, "Woe to the land when its king is a child," was sadly realized, for the next ruler was the posthumus son Ladislaus, while the real ruler was Uladislaus, King of Poland, whom Albrecht's widowed queen was forced to marry.

In Hungary control was granted to John Hunyadi during Ladislaus' minority. This uncouth hero wrought lasting fame to his name by surprising the Turkish camp at Belgrade, and utterly defeating the armed hordes who intoxicated with their capture of Constantinople, 1453, rushed wildly into Hungary.

*Our Prince of Wales feather originated when the Black Prince captured John of Bohemia's three white plumes and assumed them as his princely crest.

The Austrian dominions having become divided, the Tyrolese and the Styrian branches struggled long for ascendancy. Finally Maximilian* (1459-1519), son of Frederick III. of the Tyrol, having manifested special qualities of leadership, was elected Germanic Emperor and King of Austria and Hungary, 1493.

Maximilian had won his spurs against the Turks, and he further won renown by marrying Mary of Burgundy, the richest European princess. King Matthias of Hungary, whom Maximilian deposed, is credited with the saying, "Austria wins by wedding not by war. What Mars wins Venus transfers."

The union with Mary of Burgundy, who inherited the Netherlands from her father, Charles the Bold, initiated a struggle which lasted three centuries, and brought hostilities to France, Spain, Austria and the Netherlands. On the death of Mary, Maximilian found himself but ill received in Flanders, and was compelled through the instrumentality of Louis XI. to submit to the famous treaty of Arras, whereby his daughter Margaret was married to the dauphin (Chas VIII.) of France, her mother's domain, Burgundy, going with her. At the same time his son Philip, who was appointed to the Pays-Bas, married the daughter of Ferdinand and Isabella, which brought the Hapsburgs to the throne of Spain.

Jealous of Charles VIII.'s power in Italy, Maximilian pursued him across the Alps, but fell back on Switzerland, where he was forced to declare the Helvetic state free and independent of Austrian control and Imperial taxes. In 1509 he joined the League of Cambray for the partition of the Venetian territories, which extended to the east side of the Adriatic. This region, which Italy is now fighting to reclaim, was first wrested by Maximilian, and in fact most of northern Italy fell a prey to Austrian domination.

In the affairs of Hungary and Bohemia Maximilian was far-sighted in resorting to the Hapsburg policy of marriage, so arranged a double wedding between the son and daughter of King Ladislaus and two of his own grandchildren. Archduke Ferdinand thus gained the crown of these two countries.

Feeling his life uncertain on account of ill-health, for four years Maximilian carried a coffin on his numerous campaigns, and on his deathbed gave minute instructions for the magnificent monument in Innsbruck erected to his memory, but not over his tomb.

Although possessing some conspicuous faults, Maximilian the Great was one of the worthiest who wore the Purple. In spite of suffering many reverses he was a brave soldier, if not a consummate general. In scholarship he was accomplished, and as an administrator of law he was just even to leniency. Had he lived longer, probably he would have befriended Luther, as he showed moderation toward him.

Charles V. (1500-1558), Maximilian's grandson, succeeded to the Imperial erown 1519, but on the throne of Austria he placed his brother, Archduke Ferdinand. Charles also inherited the sovereignty of Spain and of the Netherlands, and reigned over the widest realm since Charlemagne's time.

In his first Diet at Worms he sought measures to oppose the liberal tendencies of the Reformers, and before this Assembly Luther made his noble assertion, "Here I stand, with God's help I can do no other." While Charles pretended tolerance and invited the Protestant princes to meet at Augsburg, where they presented their famous Confession, he was really in league with Rome, and denounced Luther with the ban of the Empire, 1530, though having granted him safe conduct.

The Protestants became alarmed, but fortunately an invasion of the Turks distracted Charles I.'s attention, and for a few years comparative religious quiet prevailed. However, in 1545 he summoned the Council of Trent, which pronounced Luther's writings heretical and banned all Protestants from the Church. Elector Maurice of Saxony, the Landgraf of Hesse and the Elector of the Palatinate -all staunch Protestants-were prepared to fight, but Protestant troops being vastly inferior in numbers, submission to the Emperor was deemed advisable. On the death of Luther Charles seemed to show more tolerance, and even visited the Reformer's grave, where, on being urged to

^{*}The name Maximilian was derived by his father, who dabbled in occult sciences, from astrological considerations connected with Fabius Maximus and Paulus Æmilius.

desecrate the ashes, he replied, "I war not with the dead."

In 1556 the famous Pacification of Passau was agreed upon, whereby religious liberty was vouchsafed to all Protestants. The same year Charles repaired to the Netherlands with his son Phillip II., where, weighed down with infirmities and disappointments, he renounced all his powers of sovereignty, and retired to a monastery in Spain, in which lonely retreat two years later he died.

To Philip II. he assigned the throne of Spain and the Netherlands, but to his brother Ferdinand fell the Imperial crown by choice of the Electors. As the Pope did not acquiesce, saying Charles V. should have resigned under authority of the Church, the Roman Pontiff's crowning ceased to be necessary.

Emperor Ferdinand I. (1503-1564) was a shrewd ruler, and by diplomacy became King of Bohemia after the late king was defeated by the Sultan Solyman and his Turks. In Hungary he had too strong an opponent in John of Zapoli, consequently Bohemia and Hungary again became separate. But Hungary soon found herself in the toils of the Ottoman power, from which she was not completely freed for 100 years. All Ferdinand's efforts to recover the country from the vassalage of Turkey proved ineffectual, and he was compelled to buy a truce, paying an immense annual tribute.

During his long reign he had many religious and political troubles, which were bequeathed to his son Maximilian II. (1576), who was privately a Protestant, although he retained his father Confessor. He showed the utmost tolerance to both Faiths, and managed to preserve religious tranquility in Germany when the rest of Europe was in ecclesiastical ferment. Indeed, when the Massacre of St. Bartholomew occurred 1572, although Maximilian was the father-in-law of the weak French king Chas. IX., who, instigated by his mother, had promoted it, Maximilian expressed the greatest abhorrence of the act

and wrote to the young King: "No crime is greater in princes than to tyrannize over the consciences of their subjects." He also espoused the cause of the Prince of Orange against the Duke of Alva in the Netherlands.

Maximilian II.'s greatest external troubles were with the Turks and Hungarians, but through tact he succeeded in having John Sigismund, King of Hungary and Transylvania acknowledge him as his superior sovereign and to name Rudolph, Maximilian's son, as his successor. Hence Rudolph became King in 1575.

On his father's death Rudolph II. (1552-1612) succeeded to the Archduchy of Austria, and in due course to the Empire. He was one of the worst of Emperors, and persecuted both Lutherans and Calvinists. The predatory propensities of the Turks kept him busy fortifying his Eastern frontier against the new and warlike Mahomet II.

Rudolph's most intriguing enemy was his brother Matthias, who formed a compact with Hungary, Moravia and Bohemia, securing for himself the succession. Both brothers simply temporized with the Turks, who gave enough trouble later. In religious matters also both proved vacillating, but headed by the Lutherans of Moravia freedom of worship was forced from them and a royal ediet granted 1690. Rudolph, however, tried to evade his promises, which led to his deposition.

Matthias (1612-1619), whose reign was short, made his capital at Prague, the old beleaguered city of Bohemia. The unspeakable Turk again asserted himself, and also in no uncertain way the Protestants protested against the failure of the freedom promised. In Bohemia they claimed there could be no worship so long as certain royal ministers were in power. Thereupon a delegate at a Convention (1618) straightway threw them from the Palace window in Prague, which act incited rebellion, that practically led to the Thirty Years' War, during which time of hate "Man's inhumanity to man made countless thousands mourn."

(Continued next month to the War of the Austrian Succession.)



We are pleased to announce that there will be a meeting of the Canadian Pub-

Canadian Association.

lie Health Association in Toronto on Friday and Public Health Saturday, Sept. 3rd and These days are in-4th. cluded in the duration of

the Canadian National Exhibition when cheap fares prevail, and there is an influx of visitors from all over North Am-These dates also immediately precede those for the American Public Health Association, so that friends may very profitably attend both. The suddenness of the war last year indicated a withdrawal of the annual meeting, but we have to some extent accommodated ourselves to circumstances during the year, and the Executive feels sure that there will be a good attendance at the Sessions. They will be made interesting and will endeavor to relate Preventive Medicine to the exigencies of war time. The programme has been roughly drafted and will be presented somewhat as follows: Friday, morning, Sewage Disposal; Water Purification; Disposal of Organic Waste from Factories, Friday afternoon, Early Recognition and Control of Tuberculosis; Notification and Control of Venereal Diseases; Co-operation of Agencies. Social, Hygiene and Medical Inspection of Schools. Friday evening. President's address; Symposium on Control of Milk Supply. Saturday morning, Symposium on Housing. Saturday afternoon, Symposium on Mental Defectives and the Care of the Feebleminded. Saturday evening, Entertainment by the Local Committee, which will include a visit to the great Exhibition. As you will see, this programme will be very valuable and we hope that a great many members and friends of the Association will make it convenient to attend.



A new field for out-patient work is developing in connection with mental diseases, as shown by the fol-

A New Field lowing extract from The For Out-Survey of May 15, 1915. patient Work. The development of this special out-patient service

connected with the hospitals for the insane, and in psychopathic hospitals for the study and disposition of cases of mental disease and defect, will undoubtedly lead also to the extension of special clinics for mental diseases in the out-patient departments of the large general hospi-

With the rapid development of out-patient activity in the Massachusetts Hospital for the Insane, a new era seems at hand. For many years a complaint has been heard that the doctor saw the mental case too late to do any good. In spite of new legislation and attempts to maintain high hospital standards at our institutions, the fact has remained that most of our patients have been sent to state hospitals as a last resort and so have received expert advice after their disease had advanced to such a point that forceful confinement was necessary.

Though the average hospital physician has recognized that state care really meant more than the custody of incurables, the average layman has been inclined to overlook the fact that prevention and treatment were the first interests of such physicians. On January 1. 1913, an out-patient department was opened at the Psychopathic Hospital in Boston. Complete in every detail, with elaborate provision for social service work, this department serves as a model for out-patient organization.

At last the social service idea had reached the insane hospital. Not content with having Boston alone provided with such an opportunity for early diagnosis and after-care, the Massachusetts Board of Insanity asked in August, 1914, that each hospital under its supervision consider opening an out-patient department. This request met with a ready response, and one by one the hospitals have announced new clinics, until now, only a few months since, nearly every hospital has undertaken some form of out-patient work and ten have opened clinics in more than twenty different cities and towns.

A year ago advice could be had at great expense only by few except those in Boston. A patient had to be committed as insane to get proper treatment, except the few who could be persuaded to go to hospitals as voluntary patients. When discharged from a hospital no more was known of the patient until a relapse brought him back to the hospital again. The hospital doctor, even though his motives were of the best and his action the most altruistic, was looked upon as one a little apart from the rest of the medical profession and perhaps akin to the jailer.

Now all this is to be changed. Nearly every large city in the state has a clinic. Some are monthly, some weekly, and one is daily. Every effort is made to make them reach patients early, such as notifying practising physicians of the date of each clinic and putting a short notice in local papers. Especially are former hospital patients urged to report from time to time that a relapse may be forestalled.

Social service is being added, and relations between doctor and patient are becoming more intimate and less official. Also the doctor of the insane hospital is taking his rightful place among practitioners—that is, he is being looked up to as a specialist, rather than down upon as a custodian.

Another wholesome feature is the cooperation between different hospitals in this work, a thing of which there has been altogether too little in the past. Each hospital is becoming the centre for conserving the mental health of its neighbor-

hood rather than a gloomy place where "crazy" people were confined, a place always looked at with mystery and suspi-

These clinics are being well received; patients are using them in increasing numbers and doctors are not only sending patients for consultation but are going themselves to consult about patients under their care and to inquire for those whom they have sent to the hospital.

Thus it seems that a breach is being The barrier between patients needing advice and the doctors anxious to give it is being broken down, and the insane are being considered as sick friends, not as outcasts.



The New England States generally show a higher death rate from cancer than any

cer in New England.

other group of States.

The Campaign This does not mean that Against Can- New England people are more susceptible to this disease. Cancer is a disease of later adult life and

it is well known that in parts of New England there are more old people proportionately to the population than in Nevertheless, the many other regions. death rates recently published by the U. S. Census Bureau have stimulated much activity in these States in the educational campaign for the control of malignant disease.

What are the facts upon which this movement is based? According to the report of the Census Bureau, in 1913 there were 49,928 deaths from cancer in the registration area of the United States. corresponding to a death rate of 78.9 per 100,000 of the population.

All the New England States have individual cancer death rates much higher than this Connecticut's rate, which was the lowest of any of the New England States, was 85.1. Vermont's rate was the highest with 111.7, while the rates of the other States were correspondingly high, Maine having a rate of 107.5, New Hampshire 104.4, Massachusetts 101.4, and Rhode Island 93.3. When these figures are compared with those of Kentucky, with a rate of 48, they seem indeed very

They mean that 6,817 people died in 1913 in New England from cancer. But it does not necessarily follow that cancer is more common in New England than elsewhere. The Census Bureau attributes the high cancer death rates in certain districts to the relatively high age distribution of the population and the negligible amount of immigration. Translated into everyday terms this means that in New England the proportion of people over forty years of age, or at the cancer age, to those under forty, and so less liable to cancer, is greater than in other places, Yet there is no doubt that the cancer death rate in New England as well as in other parts of the country is much higher than it ought to be. Without question a large percentage of cancer deaths can be prevented by early recognition of the symptoms and prompt recourse to competent surgical advice and treatment. Cancer is not a hopeless incurable affection, as so many people wrongly believe. Those who know the facts believe that if the public can be properly educated in regard to the early signs of the disease and will act on this knowledge. the present mortality should be reduced at least half.

In combating taxation without representation the patriots of Massachusetts dumped overboard the famous cargo of tea. Vermont medical men have become so concerned over the high cancer death rate of their State that they are going to hold a "tea-party" of another sort and attempt to dump overboard the high death rate from malignant disease. While their action is not so dramatic as that of the patriot raiders they hope to prove that through its great ultimate benefit to the community it will be almost as patriotic. The New Hampshire State Board of Health has recently published sound advice in its bulletin. In Maine an active committee of the State Medical Society is arranging public lectures and causing the publication of instructive articles in the newspapers. Massachusetts has a well organized branch of the American Society for the Control of Cancer with headquarters in Boston. The Vermont State Medical Society has arranged a series of public meetings to spread the bad news of the high cancer death rate and the good news of the hope of controlling the disease by earlier recognition and prompt surgical treatment.

For some years Iodine has been recognized as perhaps the best antiseptic in

First-Aid surgical practice. Since the beginning of the war it has proved a veritable boon the battlefield. It is possible now to purchase

iodine in ampuls put up by the Mulford Co. These ampuls offer iodine in a convenient and permanent form for immediate use. Since iodine is the ideal germicide and local antiseptic, if the same is applied directly to wounds or abrasions-particularly those following gunshot or blank cartridge wounds-it will prevent the growth of tetanus streptococci and other disease-producing germs. Iodine "First-Aid" ampuls are being used extensively in the European war, and are specially suitable for use in hospitals and by National Guards. Boy Scouts, industrial plants, schools, railroads and steamships as well as in emergency kits of the household, in automobiles, police and hospital ambulances. All you need to do is to break the glass and pour the contents on the wound. The individuality and convenience of the ampul will prove very acceptable.



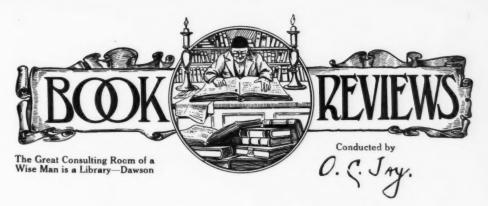
There appears in this issue an article by Joseph Race, City Bacteriologist, Ot-

Milk and Tuberculosis.

Tuberculosis.

tawa, on Milk as a Casual Factor of Tuberculosis in Ontario. As you will observe, this article has

been very carefully prepared and should prove of value in our study of this problem. One thing that is to be regretted is the comparative lack of data in the country generally-may we ask that the Universities and the Public Health men co-operate to eliminate this lamentable state of affairs. It is a great question as to whether the Universities do their full share towards the solution of these immense problems. We are spending a great deal of money on our Universities, and we believe the public generally may reasonably expect more returns for the money appropriated. There is no reason why our universities should not take a greater interest in such a practical issue as this.



Manual For Health Officers.

7 E presume that too many books cannot be published for Health Officers to read and digest particularly at a time when Preventive Medicine is making such rapid strides. The present volume seems to be of value principally for the references which are contained in its footnotes, for there are two or three other excellent volumes now on our shelf which say all that this book tells us. It is rather interesting to note, since the Public Health Journal is asked to review it, that the author has only once (page 491) referred to this Journal, and that in face of the fact that during the past six years a great many excellent articles have appeared to which he should have referred. We believe we have stated before in these pages that authors in the United States would do well to look to Canada for ideas. Their books would thus be materially improved and Canadians would be more interested as buyers. We are living on the same continent and our problems in Public Health are similar. Verbum Sap.

A MANUAL FOR HEALTH OFFICERS—By J. Scott MacNutt, A.B., S.B., Sometime Health Officer of Orange, New Jersey; Lecturer on Public Health Service in the Massachusetts Institute of Technology—660 pages, 4 charts, cloth \$3.00 net—John Wiley & Sons, Inc., 431 Fourth Avenue, New York—London: Chapman & Hall, Ltd.—Montreal, Canada: Renouf Pub. Co.

Personal Hygiene.

TE are heartily in accord with the following, quoted from the introduction to this volume: "The literature for the layman pertaining to personal hygiene is, in great measure, unsatisfactory and irresponsible. Many of the so-called 'health books' are of very questionable authorship, often the compilation of a layman, perhaps an amateur pathologist, an inaccurate physiologist, a moralist of vague opinions, with, unfortunately, a tendency to cater to the prurient. books make hypochondriacs of their readers, and if they include advice as to selftreatment they may do great harm." This book has been written by eminent physicians, specialists in their several departments, and edited by a specialist well known and respected by his professional brethren. The result achieved has been along the line that physicians would enjoy seeing in the hands of their patients. It makes the heart sick to see sick people or those who think they are sick pouring over "Dr." Pierce or Lydia Pinkham or "Dr." Ayer, or the dozen other quacks who never really lived, thus making their troubles trebly trouble-We are delighted with this book. Our only wish is that it might replace the slushy and incompetent volumes that are now on the family bookshelf.

It is divided into twelve parts, each written by a specialist.

- 1. Hygiene of the Digestive Apparatus.
- Hygiene of the Skin and its Appendages.
- 3. Hygiene of the Vocal and Respiratory Apparatus.
- 4. Hygiene of the Ear.

- 5. Hygiene of the Eye.
- 6. Hygiene of the Brain and Nervous System.
- 7. Physical Exercise.
- 8. The Body Posture.
- 9. Domestic Hygiene.
- 10. Food—Adulteration and Deterioration.
- 11. The Hygiene of Infancy.
- Appendix, telling about Pulse and Temperature, Massage, Accidents and Emergencies.

Physicians are delighted to have their patients know, but they want them to know in the right way.

A MANUAL OF PERSONAL HYGIENE
—Sixth Edition, Revised and Enlarged
—Proper Living upon a Physiologic Basis—By American Authors—Edited by
Walter L. Pyle, M.D., Philadelphia—
12mo. of 543 pages, 138 illustrations—
Philadelphia and London: W. B. Saunders Company, 1915—Cloth, \$1.50 net—
Sole Canadian Agents, The J. F. Hartz
Co., Ltd., Toronto.



The Care of the Teeth.

• HIS little volume of 63 pages, beautifully bound, is one of a series of Harvard Health talks published from time to time. The subject of this particular book is of extreme interest since the importance of the care of the teeth to the health of the individual has been demonstrated so admirably during the last halfdecade. Since the war began thousands of Canadians were turned down on account of their teeth. Recently the Canadian Army Dental Corps has been officially recognized and dozens of Dental Surgeons are taking the position in the Army which should have been accorded them years ago. We are progressing, however, if slowly, and we should like every person who can read to study this little hand-book. If the knowledge of dental hygiene as simply told here were in the possession of the people

we should not see the hideous mouths that have been presented to us since the war began.

THE CARE OF THE TEETH—By Chas. A. Brackett, D.M.D., Professor of Dental Pathology in Harvard University, Cambridge—Harvard University Press, 1915—Price 50 cents.



The Tuberculosis Nurse.

T is not an exaggeration to say that nearly 90 per cent. of the human race have the germ of tuberculosis lurking somewhere in their anatomy. Those who succumb to its ravages do so because of faulty environment or weakened physical constitution. Heredity, of course, plays its part, but that is a story in itself. It is only of late years that thorough attention has been paid to municipal nursing and community care. This book gives the experience gained in Baltimore, the problems that have offered themselves and how they have been met. The problems of any great city are very much the same and so this book ought to prove of value to nurses everywhere who are engaged in the fight against tuberculosis. We are perfectly in accord with one section which states that experience has taught the author to look askance at all volunteer work on the part of physicians visiting dispensaries. When dispensaries are established the physicians should be paid by the municipality, just as "Tuberculothe nurses receive their fee. sis is a disease that cannot be overcome by work or economical methods." This volume describes the duties of a nurse on a very special duty, and is very much worth while.

THE TUBERCULOSIS NURSE. Her Functions and Her Qualifications—a Handbook for Practical Workers in the Tuberculosis Campaign—By Ellen N. La Motte, R.N., Graduate of Johns Hopkins Hospital; Former Nurse-in-Chief of the Tuberculosis Division, Health Department of Baltimore, with an Introduction by Louis Hamman, M.D.—G. P. Putnam's Sons, New York and London.



XVII



JEAN BLEWETT

"Mrs. Blewett possesses a deep and rich nature, made deeper and richer by the wisdom of a kindly, gentle and womanly heart ever attuned to the higher and better things of life..... It is difficult to say whether Mrs. Blewett is stronger in prose or verse. She reins her steeds about evenly. Stanley Waterloo, the well-known American writer, in a recent study of Mrs. Blewett's work, reveals the secret of her success in these words: 'Mrs. Blewett possesses that subtle gift which ensures success as a writer—the power to make your hear and feel with her. Thus, she writes of a man, and you know him well—his virtues, vices and absurdities; she writes of a child at play, and you hear its laughter; of a wild bird nesting, and you see the shining head and bosom and catch the smell of leaves and moss and dew-wet grass.'"—Thomas O'Hagan, M.A., Ph.D., in Canadian Essays.

D. R. J. D. LOGAN is my authority for the statement that Jean Blewett is descended from the great Gaelic Nature Poet, Duncan Ban Macintyre. If so, it is but another instance of the perpetuity of the Law of Heredity. Jean McKishnie was born at Scotia, Lake Erie, Ontario, Nov. 4th, 1862, of Scottish parents, John and Janet McKishnie, both natives of Argyllshire; and was educated at the local public school and at the Collegiate Institute of St. Thomas, Ont. Shortly after graduation she married Mr.

Bassett Blewett, a native of Cornwall, England.

While still in her teens, Mrs. Blewett's poems, short stories and articles in the public press and in magazines began to attract attention; and in 1885 a novel appeared from her pen entitled "Out of the Depths," "Heart Songs," a collection of her verse (William Briggs), published in 1897, at once became popular, and "The Cornflower and Other Poems," issued by the same publishing house in 1906, increased the author's fame and popularity. One of her poems, "Spring," captured the prize of \$600 offered for the best poem on this trite subject, by the Chicago Times-Herald.

Recently Mary Josephine Trotter contributed an interesting article on Jean Blewett to Everywoman's World, from which the following is quoted:

A BARD OF THE COMMON THINGS

Jean Blewett has neither refused to grow up, nor has she required to "thing back" to experience joy as quick as childhood's in the springing blade and the spreading leaf, and also in the realm of human nature. All this I know from her voice and her expression as she showed me the view from the window in her bedroom, in which she has been a prisoner since November.

Prisoner? The word is not à propos exactly Not even the pangs of physical suffering have

been able to bind the imagination of a woman profoundly in love with life and able to put her passion into writing. For months Mrs. Blewett has been busy on a novel, having for its setting the Peace River country in which wild and romantic district she camped with her husband and son for weeks last summer. So, while her eyes dwell on the High Park tree tops—her house in Toronto commands that prospect—her mind is engaged with a less familiar country with which she aims to acquaint Canadian readers.

Eternal nature and human life have supplied Mrs. Blewett with abundant topic matter. She was married early—at sixteen—and the first verses she ever wrote and for which she was paid by Frank Leslie's Monthly, were a lullaby to her own baby which is included in her well-known volume "Heart Songs." Her poetic attempts, like Alfred Noyes', have been from the first, remunerative. The poem which made a demand for her work was published in the Toronto Globe shortly after the cradle song's appearance. It is typical of the optimism which characterizes this poet's disposition, and for this reason, is quoted in full herewith: "Good-Night."

Jean Blewett is one of a literary family. Her brother, Mr. Archibald McKishnie, is frequently a contributor to Canadian publications, and a younger sister is winning success as a journalist in Detroit, Michigan.

For years Mrs. Blewett has been a special writer for the Globe and other household publications, so that her name has become familiar to a very large and appreciative public. She delights to write of "the common things," would rather be sympathetic than startling, and consequently, enjoys a popularity which any ambitious litterateuse might covet.



GOOD-NIGHT

I am not brave enough to sing
The requiem of a hope just dead,
That word "Good-bye" would surely bring
The shadow upon swifter wing.
Come, let us say "Good-night" instead.
See where upon the water's crest
The sky comes down, a samite pall;
To our poor vision, dim at best,
That curtain of rare amethyst
Marks the sure ending of it all.
O Heart, the lesson you forget!
The wind which goes with hurrying sweep
Sees farther on, and farther yet,
The white ships move, the waters fret,
The glorious stars their vigil keep.
So not "Good-bye," "Good-night" that's

The loneliness, the loss, is mine; To-morrow, when the glad winds call The folds of mist will backward fall And leave me with my hand in thine.



WHAT TIME THE MORNING STARS ARISE

[Lieutenant Reginald Warneford, while patrolling the skies over Belgium in his aeroplane at 3 o'clock in the morning of June 7, destroyed a German armed Zeppelin, containing twenty-eight men. The young aviator won instant fame by his heroic act. He received the Victoria Cross from King George and the Legion of Honor from France.]

Above him spreads the purple sky, Beneath him spreads the ether sea, And everywhere about him lie Dim ports of space, and mystery.

Ho. lonely Admiral of the Fleet!
What of the night? What of the night?
'Methinks I hear,'' he says, "the beat
Of great wings rising for the flight."

Ho, Admiral neighboring with the stars Above the old world's stress and din! With Jupiter and lordly Mars— "Ah, yonder sweeps a Zeppelin!

"A bird with menace in its breath,
A thing of peril, spoil and strife,
The little children done to death,
The helpless old bereft of life.

"The moan of stricken motherhood, The cowardice beyond our ken, The cruelty that fires the blood, And shocks the souls of honest men.

"These call for vengeance—mine the chase."

He guides his craft—elate and strong. Up, up, through purple seas of space, While in his heart there grows a song.

"Ho, little ship of mine that soars
Twixt earth and sky, be ours to-day
To free our harassed seas and shores
Of yonder evil bird of prey!"

The gallant venture is his own,
No friend to caution, pray, or aid.
But strong is he who fights alone,
Of loss and failure unafraid.

He rises higher, higher still.

Till poised above the startled foe—
It is a fight to stir and thrill

And set the dullest breast aglow.

Old Britain hath her battles won On fields that are a nation's pride, And oh the deeds of daring done Upon her waters deep and wide!

But warfare waged on solid land, Or on the sea, can scarce compare With this engagement, fierce, yet grand, This duel to the death in air. He wins! he wins in sea of space!
(Why prate we now of other wars?)
Since he has won his name and place
By deathless valor 'mong the stars.

No more that Zeppelin will mock, No more will sound her song of hate; with bursting bomb, and fire, and shock, She hurtles downward to her fate.

A touch of rose in eastern skies,
A little breeze that calls and sings,
Look yonder where our hero flies
Like homing bird on eager wings.

He sees the white mists softly curl, He sees the moon drift pale and wan. Sees Venus climb the stairs of pearl To hold her court of Love at dawn.



THE PASSAGE

O soul on God's high seas! the way is strange and long,

Yet fling your pennons out, and spread your canvas strong;

For though to mortal eyes so small a craft you seem,

The highest star in heaven doth lend you guiding gleam.

O soul on God's high seas! look to your course with care,

Fear most when winds are kind and skies are blue and fair.

Your helm must sway at touch of no hand save your own—

The soul that sails on God's high seas must sail alone.

O soul on God's high seas! sail on with steady aim,

Unmoved by winds of praise, untouched by seas of blame.

Beyond the lonely ways, beyond the guiding star,

There stretches out the strand and golden harbor bar.

TWO MONUMENTS

Two men were born the self-same hour:
The one was heir to untold wealth,
To pride of birth and love of power;
The other's heritage was health.

A sturdy frame, an honest heart,
Of human sympathy a store,
A strength and will to do his part,
A nature wholesome to the core.

The two grew up to man's estate,
And took their places in the strife:
One found a sphere both wide and great,
One found the toil and stress of life.

Fate is a partial jade, I trow;
She threw the rich man gold and fame,
The laurel wreath to deck his brow,
High place, the multitude's acclaim.

The common things the other had—
The common hopes to thrill him deep,
The common joys to make him glad,
The common griefs to make him weep.

No high ambitions fired his breast;
The peace of God, the love of friend,
Of wife and child, these seemed the best,
These held and swayed him to the end.

The two grew old, and death's clear call Came to them both the self-same day: To him whose name was known to all, To him who walked his lowly way.

Down to his grave the rich man went,
With cortege long, with pomp and pride,
O'er him was reared a monument
That told his virtues far and wide;

Told of his wealth, his lineage high,
His statesmanship, his trophies won,
How he had filled the public eye—
But empty praise when all was done.

The other found a narrow bed
Within God's acre, peaceful, lone;
The throng cared not that he was dead,
A man uncultured and unknown.

But in the house that he had left

A woman whispered through her tears:
"Christ, comfort me, who am bereft
Of love that failed not through the
years."

And oft his stalwart sons and tall
Would murmur as their eyes grew dim:
"A useful life is best of all;
God grant we pattern after him!"

A sick man sighed: "I'll miss his smile;"
A shrivelled crone did shake her head

And mutter to herself the while How oft his hand had given bread.

A maimed child sobbed: "He carried me To gather blossoms in the wood," And more than one said, brokenly: "A man who always did me good."

One came at twilight to the grave, And knelt and kissed the fresh-turned

"Oh, faithful soul," she cried, "and brave, Twas you that led me back to God!

"Back from the sin, the shame, the snare—
Forget your trust and faith?—not I;
Each helpful word, each tender prayer,
I will remember till I die!"

Two men that sleep: above the one
The monument an artist's hand
Has fashioned from the block of stone,
A thing of beauty, tall and grand;

Above the other naught—what then?
Ere he did fold his hands for rest,
He builded in the hearts of men
The fairest monument and best.



THE QUARREL

When Mary found fault with me that day the trouble was well begun.

No man likes being found fault with, no man really thinks it fun

To have a wisp of a woman, in a most obnoxious way,

Allude to his temper as beastly, and remark that day by day

He proves himself so careless, so lacking in love, so mean,

Then add, with an air convincing, she wishes she'd never seen

A person who thinks so little of breaking a woman's heart,

And since he is—well—what he is—'tis better that they should part.

Now, no man enjoys this performance—he has his faults, well and good,

He doesn't want to hear them named—this ought to be understood.

Mary was aggravating, and all because I'd forgot

To bring some flowers I'd promised—as though it mattered a lot;

But that's the way with a woman, your big sins she may forgive,

But little things, not worth mention, you hear of as long as you live.

A few sweet peas and carnations to start a tempest, forsooth!

For Mary got in a temper—I did the same, of a truth.

I said things that weren't gentle; she pretended not to mind-

But answered back in a manner that left me away behind.

It ended up in our saying good-bye for the rest of our days,

Both vowing we'd be happier going our different ways.

And I strode out in the garden where the trees were pink and white,

Where bobolinks scolded sparrows, and robins, wild with delight,

Chirped and called and fluttered in the blossoming trees above,

Where Nature was busy teaching her lessons of joy and love.

I made a bed of the soft, warm earth, stretched me out in the sun.

Vext and weary, I fell asleep, and slept till the day was done.

till the day was done.

The voice of my brother waked me, crying, "Quickly arise and come;

Bear up like a man, Heaven help you! Death has suddenly entered your home!"

'Twas Mary, my own sweet Mary! The eyelashes slept on her cheek,

The lips had a half-smile on them, as though they were going to speak

Some of the old-time tender words, witty rejoinder or jest,

Or ask the question they'd asked so oft, "Jim, who do you love the best?"

But the small hands gave no pressure when I took them in mine own,

And bending down to kiss her face, I found it cold as a stone.

And it came to me I could never—never, since Mary was dead—

Say, "Dear one, I didn't mean them, the bitter words that I said."

Never see the tears go from her sweet, dark eyes, and the brightness take their place,

Never watch the joy and gladness come back to my darling's face.

Not a fault could I remember—she'd been perfect all her days,

With her sweetness and her laughter, her tender womanly ways.

Dead—dead in her fresh young beauty oh, I had an anguished heart

At thought of the quarrel ending in our agreeing to part!

When two people love each other, I'll tell you the wisest way,

'Tis to think before speaking harshly, for there surely will come a day

When one will sleep on so soundly that he or she will not wake,

The other sit in the stillness and cry with a great heart-break.

It is to ears all unheeding our tenderest words are said—

The love that the living long for we waste it upon the dead.

We say this life is so dreary, talk much of heaven, I know,

But if we were good to each other we'd have our heaven below.

"Mary," I whispered, "my Mary, no flowers to you I gave,

But I'll heap them on your coffin and plant them over your grave."

A bird sang sweetly and shrilly in the blossoms overhead,

And I awoke, awoke, awoke—I'd dreamed that Mary was dead!

I woke in the golden sunshine, the birds were singing aloud.

There was no still form beside me, nor any coffin or shroud,

But just a slip of a woman with her brown eyes full of tears—

Oh, that blessed, blessed waking I've remembered through all the years.

I told the story to Mary, who hasn't let me forget

That dream in the blossoming orchard—I hear of it often yet.

If I neglect to bring flowers, it's: "Oh, you're going to save

Your roses to heap on my coffin, your pansies to plant on my grave?"

And if I lose my temper—a common weakness of men—

The sweetest voice in the world says:
"You'll have to get dreaming again."

PUBLIC WELFARE

SILENT FORCES

We stand amid the debris of a world war. The sun is darkened with the smoke of burning cities. So loud is the moan of the dying we cannot hear the song of the morning stars. The heart palpitates; the stars reel; our eyes are filled with dust and tears and blood.

When things go well, or seem to, we act as though the quiet. unseen forces were negligible and all the things that are considerable were the noisy and the obvious. Only when we are staggered with the shock of clashing hosts do we look and listen.

The invisible realm of silent forces is a thousand times more significant than the obvious world of objects and things. Some ancient words were so crammed with meaning they exploded, and their fragments are found to-day in many languages while no traces are left of the original form.

The word "Home" is a little thing, but you cannot know its full meaning till you come back after fifty years of exile to the ivy-clad cottage of your childhood, till you see again the stream, the orchard and the playgrounds, till you see the flowers planted by your mother in the by-gone and look with tear-dimmed eyes on the humble stone that marks her grave on the hillside. When a thousand memories of your childhood crowd again into your tender heart, then home means more to you than any word can tell.

Werenskewednikewerewenskererererewerewererere

Habits that seemed nothing in those far-off days have gathered force till now they roar like avalanches down the years and you are their slave; otherwise they move on like an army with banners proclaiming your life a triumph.

Every thing was once a thought. The seer traces the thought to its deed-fruit. The philosopher traces the deed back to its seed-thought, to the meaning which is its soul. The unseen thought finds in the deed a symbol, a voice, a picture of its meaning. Ideas emerge in word or gesture, in stone or star, an atom or a universe, a private quarrel or a world-war.

All this din of war has grown from selfish qualities, miscalled patriotism, which grew into rivalry, hate, cruelty, and war that will not cease till all the fuel of selfishness is burned out of our souls and we have set the silent forces of love and light to work out a better order of social well-being.—Damon.

Kekelelenkenkerkerkenkenlenkes



MILITARY SANITATION AS APPLIED TO FARMS

Bu CAPT. VICTOR F. CONNOR. A.M.C.

MY object in bringing the subject of military sanitation, as it might be applied to farms, is to try and have sanitary conditions on the latter, and in some towns also, ameliorated if possible.

I regret exceedingly to be compelled to state, from my personal observation and experience, that when a matter which concerns the farmer's health and pocket, to his advantage, the farmer is not, as a rule, interested in the least. Of

course there are exceptions.

I have noticed also that when a theological (and oft-times a political) question is mooted, he and his family at once sit up and take notice. Hence I would respectfully suggest, as the doctor's advice is often disregarded, we obtain the co-operation of the clergy, and ask them to bring this matter before their congregations. A series of circular letters might be prepared and read in the pulpits and elsewhere. A personal talk is better than reams of printed matter.

To properly introduce my subject, it were perhaps best to explain what military sanitation is. As you all know, we are now at war, and sanitation is a big subject among so many troops and in such varying conditions, but I am simply desirous of stating the precautions taken in peace times at our militia

camps.

A sanitary officer is duly appointed, whose duty it is to see that cleanliness is observed and that the regulations are obeyed, that the latrines, as the water closets are called, are fitted with the proper number of buckets, a certain percentage to the number of troops, each bucket to contain a sufficient quantity of disinfection solution, generally Izal, to cover any excreta; incinerators built, garbage tubs and slop sinks installed in their places. This is done before and on the arrival of the troops, and is the first work done, a special squad being told off to do it.

The incinerator is simply an outdoor fireplace, made by digging two shallow trenches about six feet long and a foot wide and a foot deep, crossing each other at right angles, at the junction, iron rods are laid across, and by standing a barrel on these and building a wall all round the barrel, a sort of chimney is formed with underdrafts, the material to be destroyed is placed in the barrel and set on fire, and this burns the inner shell with the barrel, leaving the shape. This fireplace is cleaned out as necessary, and it is wonderful the amount of rubbish that can be and is burnt during the day.

Garbage pails are half-barrels with holes bored in the bottom, set on similar crossed trenches, only in this case they are covered over carefully. This permits the liquid to run through and be absorbed by the ground, while the solids, bones and pieces of food, etc., are retained. These are either burnt, or, when cleaned out, given to some one for their pigs. A cover is provided to keep out

flies, and in fact the slogan of the sanitary department is "Starve the flies."

They are emptied at least once a day.

At each water tap, a similar tub is provided over a covered drain, and a sentry placed to prevent excessive waste. The shower baths are also located over a covered trench with a grating.

The whole idea is to prevent odors and flies. The horse manure is either

The portion I desire to lay particular stress on is the latrine or water-closet

carted away at once or burnt in a large incinerator.

This gives you a rough sketch of the method taken in camp to preserve health.

system, as on farms the garbage and swill is generally utilized to feed pigs, but

the incinerator might be installed in some places with benefit.

A condition which obtains on many farms, and in houses in towns as well, is a small room or lean-to built on to the house, preferably near the kitchen or pantry, sometimes a shack a few yards from the back door, with a seat with one to four openings, perhaps with covers, perhaps NOT. This porch has a sort of door at the ground level at the back of the seat outside, and the excrement deposited when the closet is in use, is removed sometimes frequently, more often rarely, once in one or two years. Some think the time for removal is when the contents almost reach the closet seat. This condition permits flies to swarm, and the smell is not at all pleasant, and is absorbed by the milk and food in the neighboring pantry or kitchen. In other cases, the lower door is left open, or is altogether absent, and the hens keep the place cleaned out. If the closet can be located handy to the pump which supplies the house, it seems to be considered so much the better.

Is there any cause for wonder at typhoid occurring in the rural districts; rather is it not wonderful that there is not more?

You who have country practices can, I am sure, call to mind many similar

and worse eases.

As I am of the opinion that the Ten Commandments are enough "DON'TS" to go on with, I always strive to suggest what to do, and the following appears to be the simplest solution of the problem.

Have the closets in use thoroughly cleaned out and well limed first, then install buckets to eatch the excrement, and in summer keep a solution of some of the coal-tar disinfectants in the same, sufficient to cover the contents, and this will destroy and prevent odors, and flies will not feed there.

As the weather in Canada is often quite cool, and most of the farmers burn lots of wood and coal, the ashes may be used to absorb the liquid and cover the

solids at this time of year, on the principle of the dry-earth closet.

There should be built a ventilating shaft, starting from beneath the seat and carried up above the roof; four six-inch boards nailed together would do, and the draught will carry off all odors.

The pails could be easily withdrawn and emptied frequently, a small hole dug and the contents emptied into it and the earth replaced, and this would not

be the disagreeable task that cleaning out the ordinary closet is.

If some manufacturer of paper drinking cups will make a large waterproof bag that will fit a large bucket, and overlapping the edges, these could be used as linings, and then closed over when removing, preventing all nuisances and keeping the buckets perfectly clean.

This is a simple, inexpensive way to cure a very common offensive condition, at the cost of a little lime, a couple of large buckets, a supply of disinfectant and paper linings, amounting to perhaps \$3 to \$5 at first, and yearly afterwards a few cents for solution, instead of paying large doctor bills, besides the extra economic loss of the labor and health of the persons incapacitated.

The various Provinces might arrange with the Government to have excursions during the Camp, free perhaps, and from 50 to 100 miles around, with a demonstration from Camp Sanitary officers.

The Sanitary Inspectors' Association of Western Canada

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SANITATION OF CAMPS

By A. PAULL

Health Department, Winnipeg. Late Sergt.-Major Royal Army Medical Corps.

Read before the Winnipeg Members.

(Continued from last month.)

Disposal of Refuse.

HE refuse of a camp consists of general rubbish strewn about tents, kitchen garbage, bits of crockery, tins, paper, and rags. This material must never be thrown casually on the ground, but needs to be dealt with strictly on a definite system. It must be thrown invariably into special receptacles conveniently placed for the purpose. In camps which are of a temporary nature these receptacles best take the form of pits or holes, but where these are employed the contents must be covered over with at least six inches of earth three or four times a day, the constant endeavor being to protect the Pits of this nature material from flies. should be located near kitchens and one at the end of each line of tents, suitably marked with a notice "Rubbish to be thrown here." In more permanent camps all this garbage and refuse should be placed in closed metal receptacles, the contents of which are removed and disposed of daily as explained for sullage water. In the absence of metal receptacles the general refuse may be collected in sacks which are hung on poles placed at the ends of the lines of tents. Kitchen garbage can be collected in tubs, barrels, or boxes, which need to be raised on stands close to the cooking places. On no account, unless necessity compels, should the solid and liquid refuse be mixed. Carts or other vehicles used for the removal of this material to the place of disposal should be designed so as to prevent any escape of their contents. The easual and too frequent mode of disposal of this waste material from camps to civilians who collect and cart it through lines and encampments without regard to elementary sanitary rules should be strennously opposed. The soldier should be made to dispose of this refuse himself. If movement is arranged for by civil contract, close supervision must be exercised to see that there is a sufficiency of suitable tubs or receptacles with covers, that the removal is made daily in proper carts and carried out at definite times during daylight when the movements of these scavengers can be followed.

I. The final disposal of kitchen garbage and camp refuse is a matter of great difficulty, particularly on field service, even in standing camps it is far from easy. The location of the place should be outside the inhabited area, and placed to leeward of the prevailing winds and remote from the source of water supply. There are two possible methods—burial and burning. The former is suitable for cases where the

amount of material to be disposed of is not excessive, but when much refuse is present the labor necessary to dig sufficient large pits is almost prohibitive. In these cases as much as possible should be destroyed by fire and what is not burnt must be buried, in fact, burning is the ideal mode of disposal in all cases. Theoretically this is so, but practically it is often found difficult and at times impossible to carry out, mainly on account of the natural dampness of the material. In wet weather the difficulties from this cause are much increased. In the field the methods for the cremation of refuse vary from the use of company kitchen fires to the employment of specially constructed crema-Various portable destructors have been proposed and used in camps, for the general requirements of field service none can be said to be satisfactory. Failing any special apparatus being available for the burning of camp garbage and refuse, ingenuity and common sense must decide as to the best method of effecting their combustion without offense.

II. Where crude mineral oil is available, its incorporation with the more combustible material constitutes an effective aid for the destruction of garbage by fire. In other eases where iron rods or lengths of railway rails can be obtained, the construction of a simple grate or grid by placing these iron rods or rails on lateral supports made of turf or earth is successful in maintaining a brisk fire, when fed with camp refuse. In any device of this kind the great essential is to secure a draught of air under and through the material to be burnt. Once a draught is secured the fire will burn, provided, of course, common sense is used in not being in too great a hurry and not feeding the fire too quickly with cold, damp refuse.

III. An improvised refuse destructor of a simple nature can be made by digging two shallow trenches intersecting at right angles; each trench should be nine inches deep and nine inches wide where they cross, and getting shallower and shallower at the ends. The length need not exceed five feet and should have a trumpet shaped mouth or end. Over the angles of the intersection a chimney or shaft some 3 ft. high and 3 ft. in diameter must be built up of turf sods or bricks. Some ingenuity

must be shown to support the walls of the shaft or chimney where they cross the trenches. This can be overcome by utilizing bits of iron bands off bales or barrels or even by knocking the bottom out of food tins and placing the metal tubes in the trenches, so as to support the walls of the shaft. A fire can be quickly lighted with any dry material at the bottom of the shaft and fed steadily by throwing rubbish down the top. The essential detail is to provide sufficient air inlets at the base. The air inlets need to be raked out periodically and kept open and free from ashes.

Another effective camp incinerator is one suggested by the Americans. It consists of a circular, shallow, saucer-like depression dug out from the ground, measuring ten feet in diameter and not more than two feet deep in the centre, from which point it should gradually shelve up to the level of the ground at its edge. The whole of this saucer-like hollow must be lined with large stones or broken bricks, and with the same materials a low wall built up all round it, the excavated earth being packed up all round it to prevent surface water gaining access to the depression, and also to provide a sloping approach for tilting refuse into it. Next a cairn or pyramid of large stones must be built up in the centre of the saucer-like basin, this pyramid should rise so as to have its top some two feet or more above the level of rim or encircling wall. The object of the central eairn is to provide a steady draught through the centre of the Ordinary wood burning material. brushwood must be used to start the fire, and after it is well burning it can be steadily maintained by adding refuse. The stones soon become intensely hot and serve to dispose of liquid and damp stuff with rapidity. This incinerator is eminently adapted for stony or rocky country. In places where large stones or boulders or broken bricks are not available a similar crematory can be devised by using empty tins of all kinds and sizes. The tins serve to keep any air space and generate an under draught, causing the whole heap to burn fiercely and the burnt tins can be used over and over again. Ultimately all tins and broken hardware should be buried and on no account be left lying about to mark the site of an abandoned camping site.

IV. No difficulty should be experienced by sanitary squad men or others in constructing and using camp incinerators of the designs mentioned, but it must be understood that initiative, ingenuity, and common sense must be shown. Assuming the refuse to be burnt be added with ordinary care and the potency of the draught trenches or holes maintained by judicious raking out, an enormous amount of material can be disposed of in a few hours, even including fæcal matter from the latrine buckets. Of course, in attempting this, special caution is needed not to cause needless offence to the vicinity.

For more or less permanent camps large quantities of manure, litter and general rubbish can be effectively burnt in a single apparatus which may be described as a large trough made of iron work raised two feet from the ground. Bands from forage bundles can be used to make this arrangement. Such a trough may be of any length, but should be four feet wide and deep. It must be placed broadside to the wind and the bars forming the bottom made to run from side to side, not lengthwise. The mesh should be about five or six square inches. In this wire trough any rubbish will burn freely.

Disposal of Dead Animals.

Closely associated with the question of disposing of camp refuse is that of how to get rid of carcasses of dead animals. This problem does not occur during ordinary peace manœuvres, but in time of actual war assumes serious proportions. again two methods of disposal are possible, namely, burial or burning. Unless special furnaces are available the burning of carcasses of large animals is impracticable, it is difficult enough to burn the dead body of a single animal, but when it comes to have to cope with the carcasses of beasts such as oxen, horses or camels, the task is almost impossible. The only alternative is to bury and even then this is far from easy. The time and labor needed to dig a pit capable of holding a large number of animals is likely to tax the strength of the units detailed for the duty somewhat considerably. What then is to be done? leave the carcasses to rot and decompose in the open is to establish a nuisance and general menace to the health of all around and is consequently not permissible. ordinary circumstances of warfare the

only course open is to disembowel the animals, bury the viscera as deeply as possible, and to leave the skeleton remains to be disposed of by nature. It is a crude disposal but the only alternative. The defeets of this procedure can, to a certain extent, be minimized by stuffing the remains with straw or other combustible material and setting light to it. This will not consume the carcass, but it will do something towards drying it up and lessening the evils consequent on its subsequent disintegration. This proposal is not put forward as the ideal or a desirable procedure; it is merely the best that can be done in circumstances of great difficulty. In many cases improvised crematories can be built up on which the bodies of animals can be burnt and every endeavor to do so should be made in all camps. Experience has shown that an incinerator made of rails, or rather a collection of grids arranged around a central cone of rails or iron rods afford the best means of burning dead animals, but even then a plentiful supply of dry materials is needed to hasten combustion. The final disposal of all refuse matter in camps should be under the direct control and direction of the Sanitary Officer of the Command. power in this direction must be of the fullest, and moreover, exercised with tact, firmness, and regard only for the sanitary interests of the individuals in his charge, and he should have at his disposal reliable N. C. O.'s of the R. A. M. C. trained in sanitary duties to act as Sanitary Inspectors.

Disposal of Excreta.

The proper disposal of this material is vital to the sanitary interests of all, but provided ordinary intelligence be exercised it presents fewer difficulties than might be expected. The moment a camp or bivouac is about to be formed or occupied the first duty of the commanding officer is to secure and protect his water supply, and at the same time to send forward his sanitary duty men for the location and preparation of latrines and urinals. The construction of these necessaries must not be delayed until tents are pitched and other camp duties have been performed, no matter how temporary the halt may be, the location and completion of these places is an urgent necessity, demanding prompt action, to be supplemented by the detailing of sanitary police to prevent surface contamination of the camp by casual easement. Certain military circumstances are conceivable when the construction of latrines may be delayed; under these conditions, to avoid surface pollution, some carefully selected spot must be marked off for the reception of exercta, and sanitary discipline enforced to see that the men resort to this spot only. At the earliest opportunity all excrement so deposited must be buried or covered with earth by the

sanitary duty men.

The general location of latrines will depend upon the direction of the prevailing wind and the position of the water supply, the rule being to place them to leeward of the camp and in such a position that no possible fouling of the water supply can result. The exact position of these place should never be left to the discretion of any officer other than the sanitary officer or such other officer of the medical corps as may be exercising sanitary supervision of the command. rines and urinals should be as far removed from the tents as is compatible with convenience; under ordinary conditions this may be put at 100 yards. The latrines must be placed as far as possible from the kitchens and other places where food is prepared or stored. The extent of the latrine accommodation in camps will vary according to whether the area is for temporary or permanent occupation; in bivouacs it should be three per cent.; for ordinary camps occupied for a few days it should be five per cent.; and in those intended for longer occupation at least eight per cent. These figures may be taken to represent either yards or actual seats, according to circumstances. The multiplication of latrines is undesirable, as one or two fairly large ones are easier of control than several smaller ones, and soil pollution is also more localized. permanent camps, latrine accommodation will best take the form of pail-middens with dry earth, fitted with rough wooden seats. This design of fixed latrine provides urine troughs for urination which may either drain into tubs or other receptacles or into soakage pits conveniently placed. This latter arrangement is undesirable unless the ground is very porous and absorbent, but even then the liquid needs frequent covering over with fresh earth. In the majority of cases, for the reception of urine iron tubs are usually provided, these being placed adjacent to the ordinary latrines for day use, and during the night at selected points convenient for the tents. The contents of the various receptacles should be removed daily and buried well away from the The ideal latrine is one procamp site. vided with pails, each of which has a water-tight cover fixed with a bayonet When the receptacles are full eatch. the covers are applied, and the covreceptacles are then placed in ered a cart for removal to the area chosen for disposal. Here the pails are emptied, thoroughly cleansed, and then brushed over with paraffin oil. This procedure is more sanitary than emptying the pails into a supposed watertight eart, which has to be emptied again and cleaned on reaching the disposal area. In practice these earts are rarely watertight and the contents are often spilled during transit. The carts are also difficult to empty without fouling the ground adjacent to the pit or trench which receives the dejecta. If portable middens, such as pails, are not provided, then the seats must be placed over pits or trenches specially dug. Whatever form the latrine takes, its successful management depends absolutely upon rigid adherence to the rule that the excreta must be quickly and completely covered over with earth, and this depends again on the enforcement of individual sanitary discipline, adequate personal and competent administrative control and supervision. To secure this, the following conditions must be observed: (1) the number of pails provided to be double the number of latrine seats; (2) removal of the pails and their contents to be carried out in daylight, say between 5 and 7 a.m.; (3) when the pails in use are removed to clean, ones containing a little dry earth to be placed in position; (4) the earth to be dry, not wet, and sufficiently broken up to pass through a half-inch mesh: (5) the supply of earth to be kept under cover; this is conveniently divided into two compartments, namely, one for a supply of earth to get properly dry before the contents of the other are used; (6) boxes or receptacles at each latrine seat to hold dry earth; (7) a scoop to be provided for each of these small receptacles; (8) the constant attendance from "reveille" to "last post" of a man at the latrine to remove pails which are full, and to replace in lieu thereof clean ones, and to maintain constant supervision that the contents are covered with earth; (9) the excreta to be removed daily to a point at least half a mile from the camp.

For the ordinary or more or less temporary camps, the usual latrine is a trench provided or not with a seat. Thise trenches may be either long and deep, or short and shallow. If the long and deep trenches be used, a trench 20 yards long, 3 feet deep and 16 inches wide is the necessary allowance for each hundred men, this seats five per cent. of the troops and allows a yard per man. The greatest care should be taken that the water supply is not fouled by these trenches, either directly by soakage or indirectly by soakage water in wet weather flowing from the trench to its immediate neighborhood. The great difficulty about all latrines of this kind, no matter whether they have seats or not, is the fact that the front edge of the trench soon gets wetted with urme, and the front of the latrine becomes a urine-sodden quagmire, the mud from which gets carried back into the lines and tents on the men's boots. In the not remote chance of there being one or more cases of typhoid fever among the command, the possibilities of infection from this source are not difficult to imagine. To remedy this, the later practice has been to dig not one long trench, but a series of short trenches in parallel, across which the user straddles and readily directs both solid and liquid excreta clear into the cavity without soiling the sides. The trench on the short and shallow system should be 3 feet long, 2 feet deep and 1 foot wide, and . the interspace between each trench not more than 3 feet, preferably 21/2 feet, if the nature of the soil permits so, as to preclude the men using the trench otherwise than in a straddling position. These trenches are far cleaner than the long type, they entail less labor to dig and are more easily filled up and renewed.

It is usual to allow 5 short and shallow trenches for every 100 men, but when the numbers are 500 and upwards, three per cent. of trenches suffice, that is, 500 men can do very well with 15 trenches. a rule a trench lasts only one day. If the space available is limited and the trenches are not filled in one day, a fewer number may be provided. The interspace of 21/2 or 3 feet is convenient and usually ample when the soil is firm, not sandy or erumbly. It allows plenty of room for another trench to be dug in it, and the men using the trench have nine inches of firm ground for each foot, and there is economy of space. A screen should always be used to ensure privacy. For covering the deposited exereta with earth, scoops, empty tins or tin lids must be provided near each trench for replacing the earth and covering the filth over. Kicking the earth over with the foot is certain to be a failure and should be discouraged as conducive to imperfect covering of the excreta and consequent slackness. Failure on their part to cover their exereta properly should be made a matter of discipline and the offenders punished.

Considerable supervision is required over all latrines, and their proper administration is a most important factor in the preservation of the health of the men living in eamps and bivouaes. One rule only must dominate the successful working of these places and that is all exercta must be covered up as soon as possible with earth, not only for mere purposes of deodorization, but to preclude the access of flies. These insects are one of the great means by which this filth and the associated germs are carried to man and his food. Therefore it becomes of great importance that each man using a latrine should be compelled to cover his excreta immediately. The condition of the latrines should be verified personally by the orderly officer of the day at least once during each 24 hours. So soon as the latrine trenches have been filled in to within six inches of the ground level, their use should be discontinued, earth thrown in and the turf or sods replaced. On the abandonment of a camp all the latrine trenches must be filled in and the site marked as foul ground.

From time to time a variety of exereta incinerators have been suggested for camps. Experience has shown them to be unsuccessful, except when dealing with small quantities of faecal matter they certainly are not suited for use by troops constantly on the move. In all camps where ordinary receptacles are not provided, pits or trenches must be dug for the purpose of urination, for day use these urinals are best placed within the screen and adjacent to the latrine trenches. Given a reasonably absorbent soil the urine soon disappears. The exposed urine sodden soil must be covered at least three times a day with clean dry earth to protect it from flies. For night use, when the day urine pits are any distance from the tents, it may be necessary to dig urine pits near the men's lines, where they can micturate at night. This is a practice which should be resorted to as rarely as possible, at all times such pits must be carefully filled in at dawn. Roughly two trenches 8 feet long should suffice for a battalion of full strength.

Much of the success or failure in regard to efficient sanitary control of an encampment depends upon the planning or arrangement of the area. To a large extent this again depends upon the extent of the land available. Assuming that the space is equivalent to that laid down officially, the various sanitary arrangements, such as cooking places, washing places, incinerators, latrines and urinals should be located in rear of the tents in what can conveniently be termed the "sanitary area." Conditions vary so much that no official plan is recognized, but each case must be judged on its merits.

In closing this subject of the sanitary control of the camp, it is desirable to emphasize the fact that much of its successful practice depends upon the exercise of eare and personal initiative. This is required not only of the men, but of the officer, as there can be little doubt that the men in all these matters will and must take their cue from the officers. The essential principle of sanitation in the camp as elsewhere is cleanliness. This state of cleanliness must not only be maintained while the camp is occupied, but on evacuation the camp area must be left sweet and clean, so that those coming after may not suffer. The surest index of the cleanliness of men and places is the absence of flies, for if there is no dirt to feed upon the fly will not be present.



